POWER'S PERFECT PROJECTION

POWER'S PERFECT PROJECTION

POWER'S CAMERAGRAPH

MADE BY

NICHOLAS POWER COMPANY

90 GOLD ST. NEW YORK

POWER'S PERFECT PROJECTION

POWER'S PERFECT PROJECTION

NICHOLAS POWER,
PRESIDENT
EDWARD EARL,
SECY. AND TREAS.

CABLE ADDRESS. NICPOWER. NEW YORK

NICHOLAS POWER COMPANY

MANUFACTURERS OF

MOTION PICTURE APPARATUS

(PATENTS OF NICHOLAS POWER)

90 GOLD STREET
NEW YORK

POWER'S CAMERAGRAPH
POWER'S DISSOLVING VIEW ATTACHMENT
MOTION PICTURE SUPPLIES AND ACCESSORIES

All communications must be addressed to the Company to receive prompt attention

POWER'S "INDUCTOR"
POWER'S "LITTLE GIANT" CURRENT SAVER

May 27th, 1913.

Mr. C. F. Young,
Empire, Canal Zone.

Dear Sir:

In response to your esteemed communication of the 16th inst. which has just come to hand, we are sending you under separate cover our latest catalog which fully describes the apparatus we manufacture and gives a number of illustrations of same.

On page 21 of the catalog, Fig. 8, is illustrated our No. 6 Cameragraph, which we strongly recommend for a traveling show. While this model has the same mechanism as the 6A, the lamp-house, lamp and stand are of different design and are of lighter construction. For this reason we recommend to traveling exhibitors and lecturers this machine as especially desirable to meet conditions they encounter, especially in the zone which you will cover.

Incorporated in the mechanism of the No. 6 machine, among other important and modern improvements, is Power's patented Loop-Setting device. This is a simple attachment which automatically resets the lower loop, and will enable the operator to run almost any kind of a film which does not pull in the loop entirely. It will reset the lower loop perfectly a dozen times a minute if necessary and does away with the annoyance of trying to reset the lower without stopping the machine. Your house will certainly never be dark during a performance with this device.

We beg to specially bring to your attention the fact that in addition to general efficiency, the Power's Cameragraph is a fire-proof machine, this company being the pioneer in the design and adoption of safety apparatus. This is best emphasized in the approval of our machine by municipal authorities, including such large cities as New York, Chicago, Boston, etc., as well as by insurance inspection departments.

There are a number of our No. 6 and No. 6A machines installed in the Canal Zone and Panama, all of which are giving excellent results, and they are used by over 70% of the trade on this Continent. Our machines are used extensively by the United States Government in the various governmental departments, army posts, naval stations, battleships, military and naval academies, etc.

168.2

We are pleased to quote you a special export discount of 25%, f.o.b. New York from the catalog prices. Terms New York draft with order or cash upon delivery of goods to vessel or to your forwarding agent. We cannot quote prices f.o.b. at points outside of the United States.

On pages 53 and 54 of the catalog you will find a description and prices of our gas making outfit for use where electricity is not available, especially for a traveling show. This outfit is the best of its kind on the market and gives perfect satisfaction. On this apparatus our best discount is 10%.

With each No. 6 machine we sell we include with the shipment an instruction book, giving in detail all information as to its operation, design, etc. which greatly facilitates the exhibitor, especially those in foreign lands.

Our confidence in our machine is manifested by our guarantee - i.e. The mechanism of the No. 6 machine is guaranteed for one year, and we are assured that you will never regret installing this apparatus. It gives a bright, steady and absolutely flickerless picture and is in every respect a perfect machine for a traveling show.

Trusting that we may receive your valued order, and awaiting your further favors, we beg to remain,

Yours very truly,

NICHOLAS POWER COMPANY,

A. J. Lang

Export Department.

AJL.

168.75

machine	225.00
Lense #5	
100 ft	
13-18	
stereo 16	
circuit Rheostat	18.00
Roof Setter	10.00
carrying case	3.50
4 8/strand.	4.00
100 cartons	2.75
	$263.25

$150.00

mech	225.
MP. Levels	
Stereo 16	
circular Rheo	18.
Roof setter	10.
Screen 15 X 15	10.
carry case	3.50
4 cond	4.
100 carbons	2.75
Cement	50.
	273.75
cash	205.31

338 slides @ 40¢ = 13.20

mech no. 6 225.00 168.75

4 condensers extra 4.00

Projectors 10x13 #4²

Star " 9x10 16

Rheostat

~~Trunk~~

~~4.00~~

2 bot film cement. @25- .50

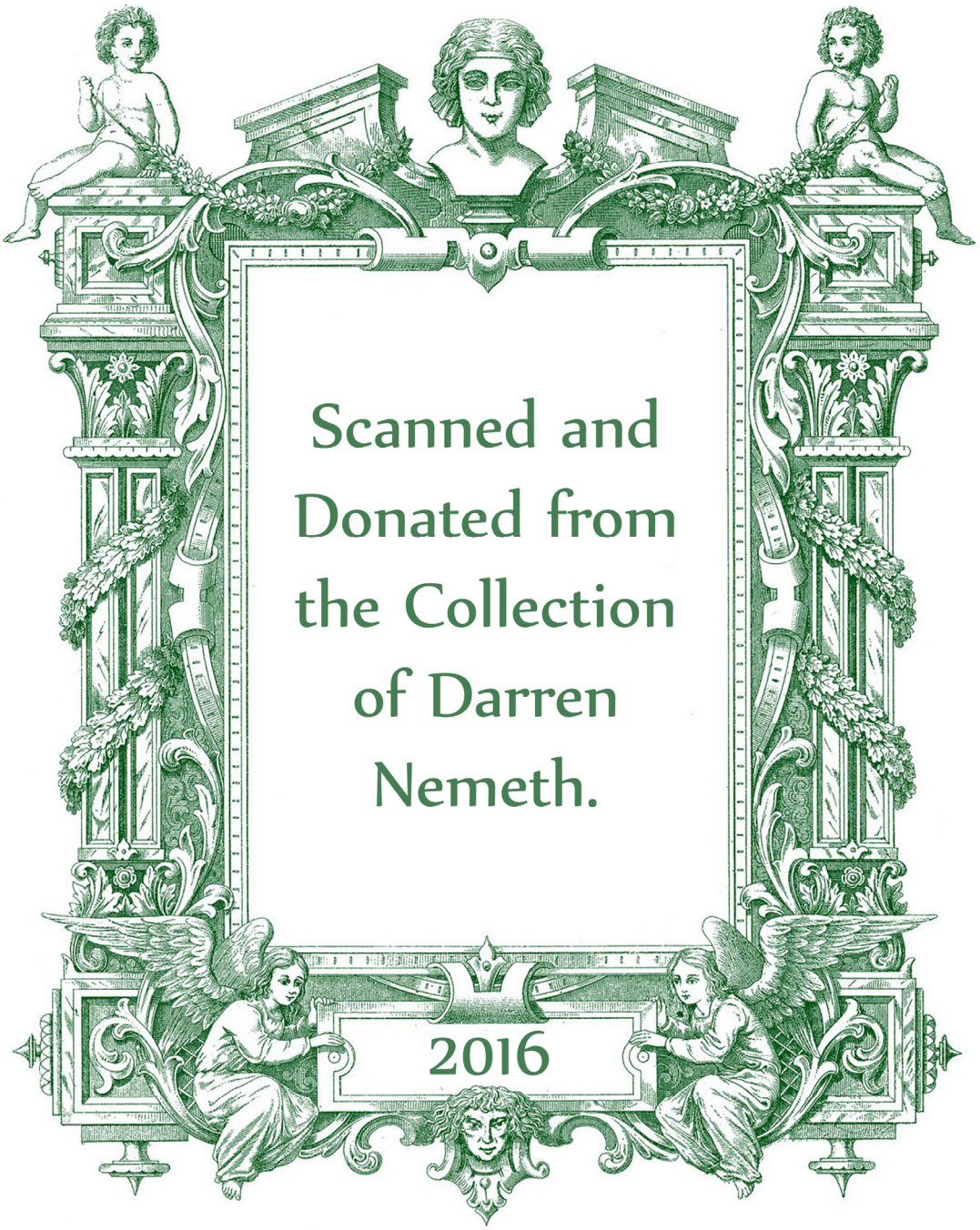
carbons 75 D.C. 25 A.C. @ 2.75 2.75

carrying case. 3.50 3.50

Loop setting device. 10.00

20.25

185 176 81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Power's

Cameragraph

"The Perfect Motion Picture Machine"

1913 Catalog

THIS SUPERCEDES ALL PREVIOUS CATALOGS

MANUFACTURED BY

Nicholas Power Company

90 Gold Street

NEW YORK, U. S. A.

Cable Address: Decarlo.

A. B. C., 5th Edition, and Western Union Codes Used.

Terms

Cash with order, or C. O. D. upon receipt of twenty-five per cent. of the amount of the purchase to guarantee transportation charges, cartage and packing.

All remittances must be made in New York funds in the form of Post Office or Express Money Order, or New York draft.

Goods delivered f. o. b. New York City. Our liability ceases when we receive the transportation company's receipt for the goods. No charge for packing or cartage, except on special deliveries.

Shipments of less than 100 pounds made by express or mail, at our discretion, unless otherwise ordered.

All orders should be accompanied by full shipping instructions, specifying freight, express or mail; also giving route, if any special routing is desired.

Orders for repair parts should, in all cases, be made by number.

Power's Cameragraphs are not shipped on approval.

All Power's machines and accessories are sold under full guarantee. Any defects in material or workmanship will be promptly rectified. But claim must be made within five days after receipt of goods. All defective parts must be returned to us for examination.

Prices subject to change without notice.

Patents

Power's Cameragraphs are fully protected by many U. S. and Foreign Patents, issued and pending. These patents are owned by the Nicholas Power Company.

The public is warned against purchasing or using infringing apparatus.

Foreword

IN PLACING this catalog in your hands, a few words of introduction may not be out of place.

Our business is to manufacture moving picture machines. A partial knowledge of what we have accomplished in that line, will, we believe, inspire you with confidence in our product.

THE NICHOLAS POWER COMPANY has a world-wide reputation. Power's Cameragraphs are used extensively in every country where moving pictures are shown; we think you know that. But you may not be aware of the following:

The literal head of this concern is, and has always been, Mr. Nicholas Power, an able designer and machinist, whose entire life has been devoted to mechanical research and invention.

For fifteen years he has been the head of the company bearing his name, which, starting under the most humble conditions, to-day occupies the largest factory of its kind in the world, doing more than 60 per cent. of the entire moving picture business of the American Continent, with a large and growing trade throughout the civilized world.

Our reputation rests securely on a rock bottom of business honesty, backed by the superior excellence of our product. What we have done in the past—and are achieving to-day—has been accomplished absolutely by sheer force of merit.

For many years we have maintained, at great expense, an experimental department which has been constantly at work endeavoring to produce a moving picture machine free from the defects present, in greater or less degree, in all moving picture machines offered to the public. Our factory is fully equipped with the machinery needed to obtain that extreme accuracy necessary in the manufacture of parts for moving picture machines. The first consideration in the design of Power's Cameragraph No. 6A has been the production of a moving picture machine which will give long and constant service with the least

possible wear of the moving parts. Other important objects sought in the manufacture of the No. 6A Cameragraph have been the elimination of all flicker; the projection of perfectly steady pictures; the providing of every possible device to insure absolute safety in handling inflammable celluloid films and the arrangement of film feeding and take-up devices which will prevent wear or scratching of the films.

All of these objects have been attained. In Power's Cameragraph No. 6A we present to the moving picture fraternity the best product of the mechanical genius and long experience of Mr. Nicholas Power, who for fifteen years has been known to American moving picture exhibitors as the foremost designer and manufacturer of motion picture apparatus.

In the following pages are offered illustrations and descriptions of POWER'S CAMERAGRAPH, justly styled by the moving picture public, "the modern motion picture machine."

The models here presented are Nos. 5, 6 and 6A. The No. 5 has been a favorite with exhibitors, operators and patrons of moving picture theatres since 1906. Its continued popularity in North and South America, Europe and Australasia, has determined a continuance of its manufacture, notwithstanding the appearance of the later models Nos. 6 and 6A, designed especially to meet more exacting conditions brought about by sharp competition in the art of projecting motion pictures. The manufacture of No. 5 will be discontinued after May 1st, 1913.

No. 6A, our newest apparatus, will be found to possess many vital improvements, which greatly increase the efficiency of POWER'S CAMERAGRAPH.

Detailed descriptions are here given of all models; the new No. 6A being presented first, followed by the No. 6 and the No. 5, which are well known to all American and foreign exhibitors.

Power's Cameragraph No. 6A

In this latest equipment we have still further added to the high efficiency already possessed by Power's Cameragraphs Nos. 5 and 6. The improvements are numerous as well as vital. Brief mention is as follows:

Mechanism

The superior qualities of Power's No. 6 are everywhere recognized, and in the No. 6A equipment the No. 6 mechanism has been retained. This mechanism has proven its worth by perfect projection and substantial wearing qualities in thousands of installations all over the civilized world. In all climates from Alaska to the equator and in the hands of operators of all nationalities.

The Arc Lamp

Our new, improved "6A" arc lamp has a carrying capacity of 100 amperes. It has 14 adjustments, amply providing for every possible arrangement of the carbons. All adjustments are accomplished without opening the lamp house door. The "6A" lamp accommodates carbons ⅜ to ¾ inches in diameter, 6 inches lower, 12 inches upper.

The Lamp House

This has been entirely remodeled and greatly improved. It is much larger, far more roomy, has a door on each side, and the lamp is much more accessible. The ventilation is so vastly superior that the breakage of condensers will be, to a great extent, lessened.

The Stand

The stand is now made entirely of iron and is absolutely rigid. By easy and rapid adjustment of the legs it can be tilted to any angle desired. The lower magazine has been built into it and will accommodate a 14-inch reel.

Film Shields

The improvement here is such that the film is practically enclosed from the time it leaves the upper magazine until the lower magazine receives it. This reduces fire liability to a minimum.

This new equipment possesses the following important strong points:

INCREASED LAMP CARRYING CAPACITY—HENCE LESS LAMP RESISTANCE.

ABSOLUTE RIGIDITY—STEADIER PICTURES.

FILM ENTIRELY ENCLOSED—GREATER SAFETY.

BETTER LAMP HOUSE VENTILATION—LESS CONDENSER BREAKAGE.

LONGER CARBONS—LESS WASTE—LESS RE-TRIMMING OF THE LAMP.

MORE AND BETTER LAMP ADJUSTMENTS—BETTER LIGHT. LARGER MAGAZINES.

No. 6 Cameragraph Mechanism

Front View Showing Three Wing Shutter and Stereopticon Attachment.

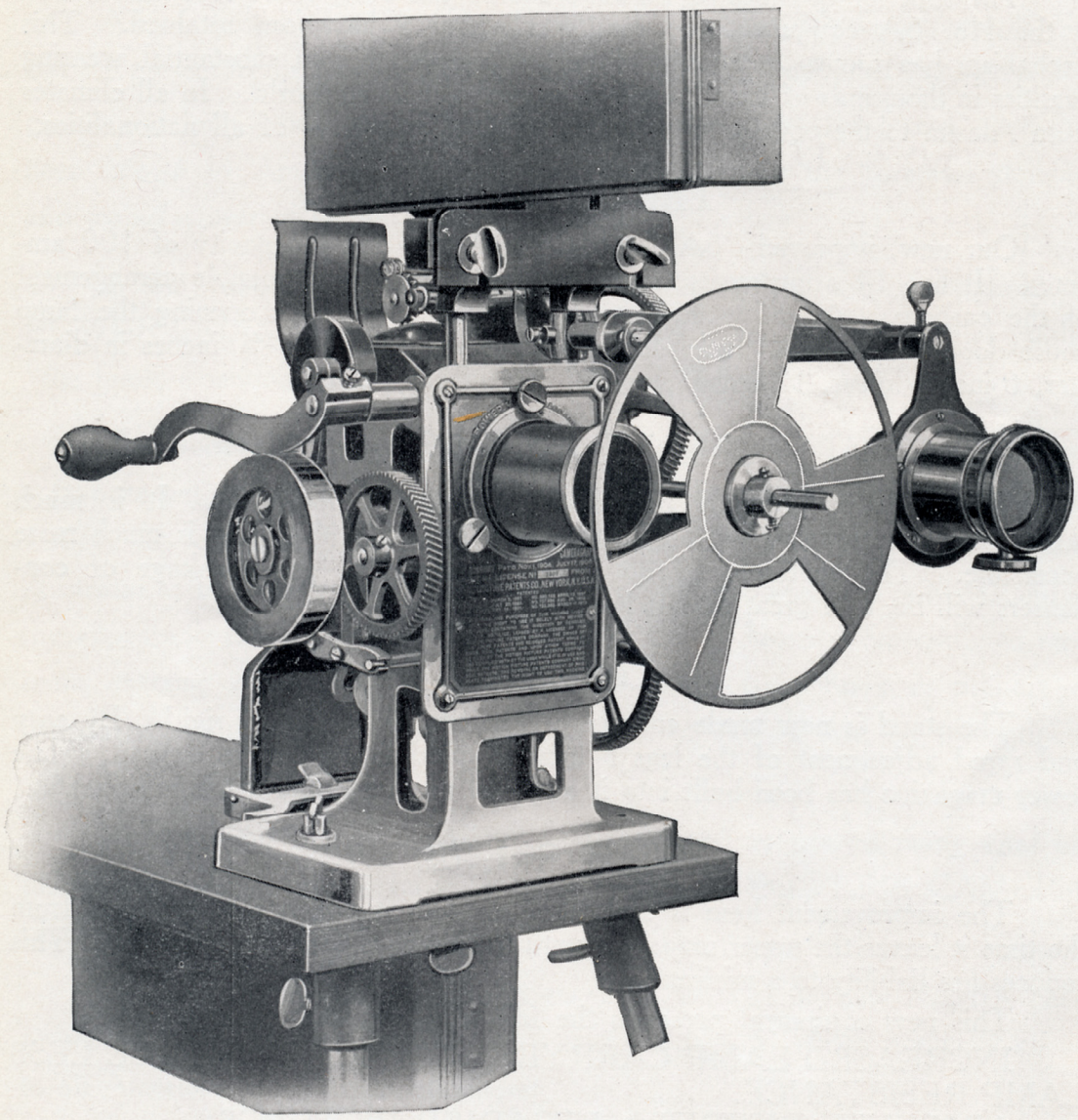
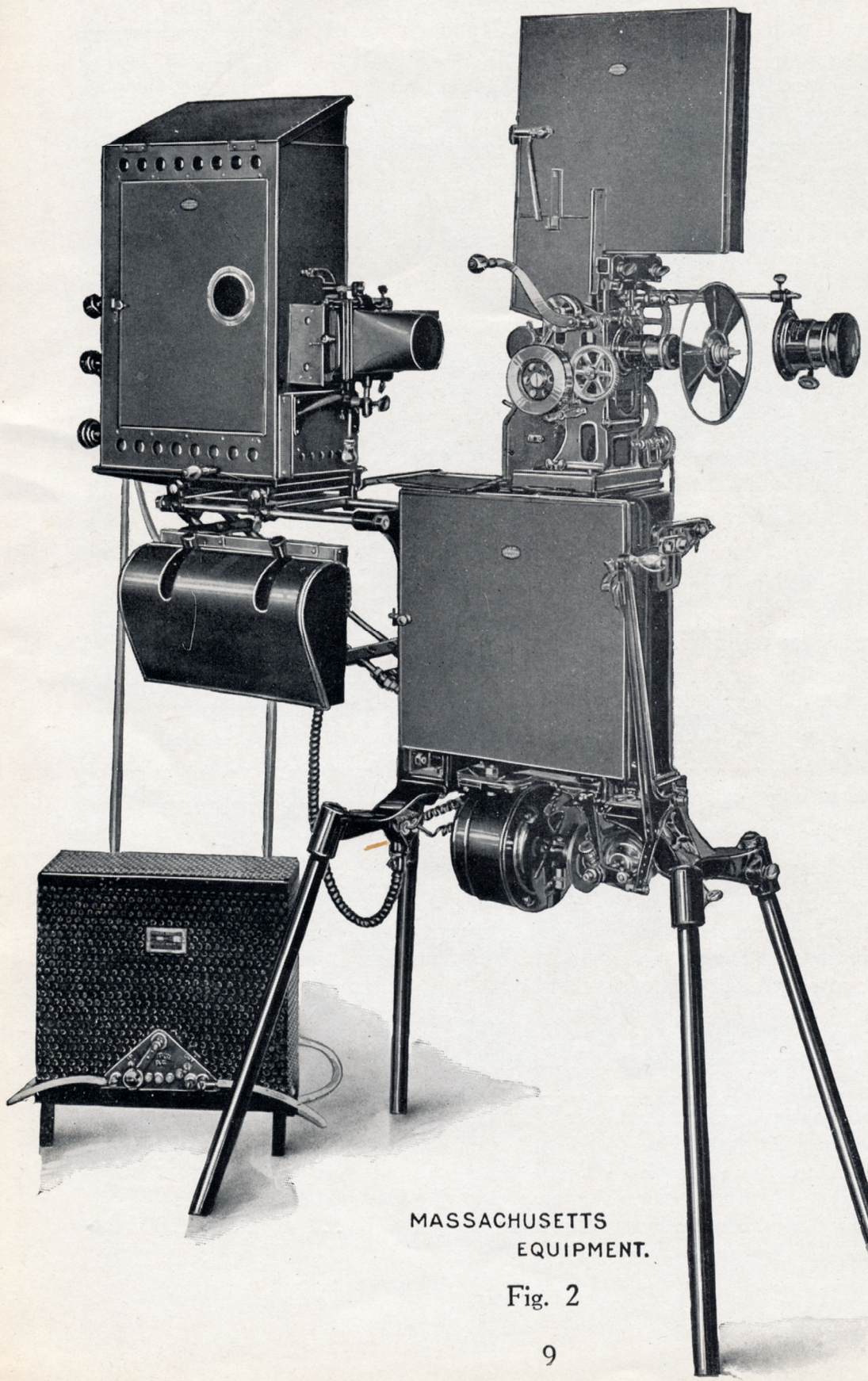


Fig. 1

This mechanism is supplied with the No. 6A machine, but with film shields which more nearly enclose the film.

Power's Cameragraph No. 6A

Complete Equipment With Motor Drive.



MASSACHUSETTS
EQUIPMENT.

Fig. 2

Power's Cameragraph No. 6A

Complete Equipment

Approved with Motor Drive by the National Board of Fire Underwriters, Department of Water Supply, Gas and Electricity of New York City and practically all other municipalities, states, etc., which have laws pertaining to such apparatus.

Cameragraph Mechanism No. 6 with stereopticon attachment.
Style "B" automatic fire shutter with upper and lower film shields.
12-inch upper magazine.
14-inch lower magazine with patented take-up attachment.
Cast iron stand with adjustable legs and set of 4 floor sockets.
Lamphouse complete with sliding ways, condensers, slide carrier, etc.
No. 6A arc lamp.
High grade motion picture objective lens.
High grade stereopticon objective lens.
60 ampere double pole knife switch with slate base.
Russia iron switch cover.
Set of asbestos wire connections with solderless lugs.
Enclosed adjustable rheostat for 110 volts, direct or alternating current, 25 to 40 amperes, with adjusting switch.
Two 10-inch reels.
"Perfect" film rewinder.

Price complete, as listed $250.00
Mechanism only, without lenses, but with stereopticon attachment, take-up feed, Style B automatic fire shutter, and No. 6A film shields 133.75
Mechanism only, as stated above, but with Loop Setter 143.75

Variations in Equipment

With 110 volt variable speed motor, A.C. or D.C., motor attachment and automatic loop setter, as shown in figure 2 ..... $297.50
With motor attachment and loop setter, but without motor 267.50
With motor attachment, but without loop setter and motor 257.50
With loop setter, but without motor attachment and motor 260.00

Additional For

14 inch Upper Magazine ..... $ 2.00
14 inch Reels, each 1.00
220 volt motor 5.00
Power's Inductor instead of rheostat 50.00

The Inductor is strongly recommended wherever alternating current is used. For complete description see page 37.

Dissolving View Stereopticon (see page 48) $150.00

For table of allowances see page 54.

No. 6 Cameragraph Mechanism

View Showing Automatic Shutter and No. 6 Film Shields.

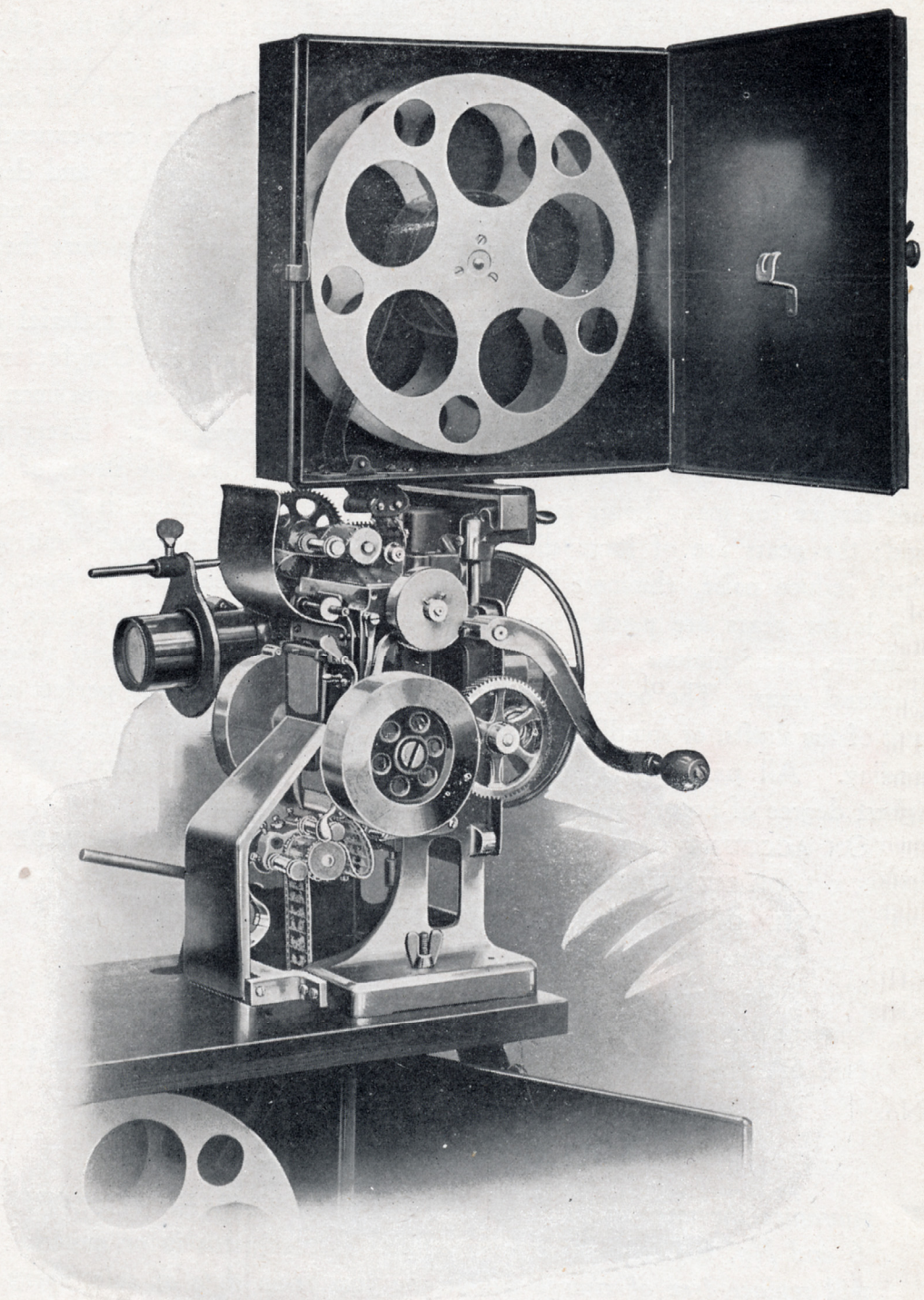


Fig. 3

The Mechanism or "Machine Head"

This is the most vital part of a moving picture projecting machine, and no degree of excellence in the rest of the equipment will atone for defects in it. For this reason, the design of the No. 6 mechanism has been made the subject of the most thorough and constant study from the first. While the lamphouse, lamp, film magazines and stand have all been designed with thoughtful study, on the mechanism itself the best efforts of the designer have been expended. In it are embodied the results of many years experience as a builder and dealer in moving picture machines and exhibitor of moving pictures, and the needs of the theatre owner, the operator and the patron of the moving picture theatre have been constantly kept in view.

Every part of the No. 6 mechanism is made of the best material that money can buy, and the workmanship is of the highest quality. Our factory is equipped with the latest and best machine tools available, and our workmen are capable mechanics of thorough training and of long experience. Every part of the mechanism is of ample size and strength to withstand the strain of constant service for many hours every day in the year. The frame is heavy and rigid; the gears are of large diameter and wide face, with spirally cut teeth which reduce noise, eliminate "back-lash" and insure steadiness of operation. The larger gears are made from a special alloy which reduces friction to a minimum. The pinions are cut from the grade of machine steel best suited to withstand wear. The bearings are of exceptional length, insuring perfect alignment of the shafts, or spindles, which latter are of extra large diameter, to prevent bending. All parts are perfectly interchangeable and are gauged with the highest degree of accuracy possible in manufacturing operations.

ON ACCOUNT OF ITS HEAVIER CONSTRUCTION, A HIGH-GRADE MACHINE OIL OR LIGHT DYNAMO OIL SHOULD BE USED ON THE NO. 6 MECHANISM. THIN OILS ARE NOT RECOMMENDED.

No. 6 mechanism with stereopticon attachment, automatic fire shutter, No. 6 film shields and take-up feed $132.50

No. 6 mechanism with stereopticon attachment, automatic fire shutter, No. 6A film shields and take-up feed 133.75

Our Guarantee

We guarantee the mechanism of every POWER'S CAMERAGRAPH No. 6 and No. 6A to be free from defects of workmanship or material, and will replace free of charge within one year from date of sale, every part showing a defect of any character, or which becomes worn out in service, provided such part is returned to us, charges prepaid, for inspection.

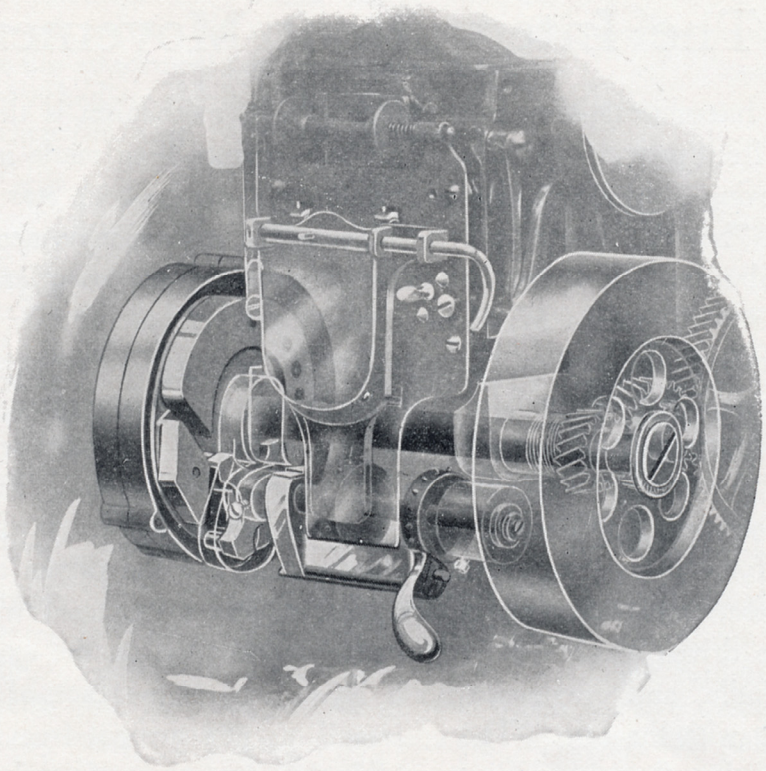


Fig. 4

No. 6 Intermittent Movement with Oil-Tight Casing.

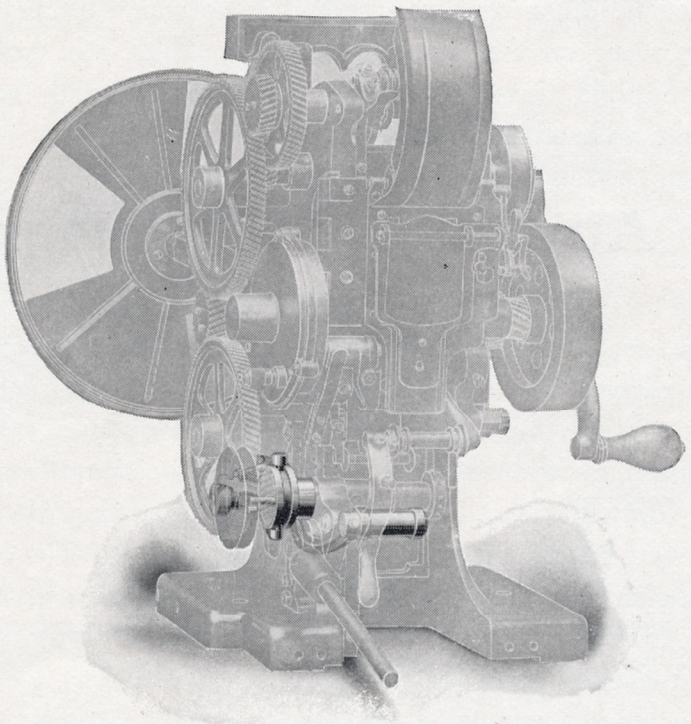


Fig. 5

Automatic Loop Setter.

The Intermittent Movement

The Intermittent Movement of the No. 6 mechanism is the most radical departure from previous practice which has recently been made in the construction of moving picture mechanisms. It has no pinwheel, no star or "Geneva." It is not a "beater," or dog movement, nor is it a claw movement; neither is it a frictional gripper. It is practically noiseless in operation and will give a maximum service with a minimum of wear. It moves the film with the least possible strain, and the picture projected is characterized by its perfect steadiness.

Only two parts are embodied in the intermittent movement. Its driving element is a diamond shaped revolving cam of hardened tool steel which is formed integral with a heavy steel disc rigidly secured to the main spindle or shaft of the mechanism. A locking ring for the driven element is also formed on the face of the disc in such relation to the cam that the driven element passes, without noise, from engagement with the cam into engagement with the locking ring. The driven element is a cross, rigidly mounted on the end of the intermittent spindle, and provided with a heavy pin on the face of each arm for engagement with the cam. The cross and the pins are cut from a single block of steel so that the pins cannot possibly loosen and be forced out of proper relation to the cam. The intermittent movement is enclosed in an oil-tight casing having an oil cup, and by keeping the casing properly supplied with high grade machine oil, a practically noiseless operation of the movement, without perceptible wear on the parts, is insured. With this type of intermittent movement more rapid travel of the film is produced, with less strain on the perforations than with other types.

Automatic Loop Setter

Since the use of fire-proof magazines and take-up devices, losing the lower loop has been a fault common to all moving picture machines. This was due to various reasons, such as defective sprocket holes, poor patches, too much tension on the take-up, etc. This has caused the operator, the exhibitor and the audience much annoyance, as it usually was necessary to stop the machine in order to re-form the loop, thus producing an annoying interruption, usually at an exciting and interesting point in the picture.

Mr. Nicholas Power has perfected a simple attachment which automatically resets the lower loop, thus enabling the operator to run almost any kind of a film which does not pull in two entirely. It will reset the lower loop perfectly, a dozen times a minute, if necessary, without stopping the machine and without any attention whatever on the part of the operator. It is a relief to all who have suffered from this very common complaint.

Power's Automatic Loop Setter can be attached to any No. 6 mechanism, but in the case of old mechanisms, it is necessary that they be returned to our factory, where the attachment can be properly fitted on.

Loop Setter attached to old No. 6 mechanisms $20.00
Loop Setter when furnished with new mechanisms 10.00

Framing the Picture

The picture is framed by a vertical movement of a carriage bearing the intermittent sprocket. The movement of the framing carriage does not alter the relation of the aperture, the projection lens and the revolving shutter. This is a very important feature, as it insures uniformly perfect projection regardless of the position of the framing carriage, and makes it unnecessary to design the mechanism so the shutter can be set while the machine is in operation.

The Film Feed and Take-up

This consists of three sprockets in accordance with the usual American practice. The top feed sprocket and the bottom take-up sprocket run constantly; and the middle, or intermittent sprocket, makes a complete turn in four successive movements with alternate periods of rest, which are five times as long as the period of movement. All sprockets are cut from specially selected steel, carefully tested for accuracy of size and form. They are then case hardened to insure long wear and are again tested for accuracy.

The film is held in position upon the sprockets by means of rollers which are so supported that they do not press against the film, but obviate the possibility of disengagement of the film with the sprocket teeth.

Safety Devices

The safety devices to protect the film from fire, comprise upper and lower magazines, an automatic fire shutter and upper and lower film shield and our patented magazine valves.

THE FIREPROOF FILM MAGAZINES, Fig. 2, are of the square type, insuring easy insertion and removal of the film and reels, and are provided with the celebrated POWER'S PATENT FILM VALVES—the only valves that absolutely prevent the passage of flame into the magazine. The lower magazine is provided with Power's patent automatic take-up device, which maintains uniform tension on the film at all times, whether the reel be empty or full.

THE AUTOMATIC FIRE SHUTTER, Fig. 3, is simple in construction, positive in operation, and its operating mechanism is all readily accessible. The parts are constructed to withstand wear and operate with very little friction. A little heavy oil or melted vaseline should be used to lubricate the parts from time to time to insure perfect operation.

THE FILM SHIELDS,, Fig. 2, completely enclose and protect the film in its travel from the upper to the lower magazine.

Revolving Shutter

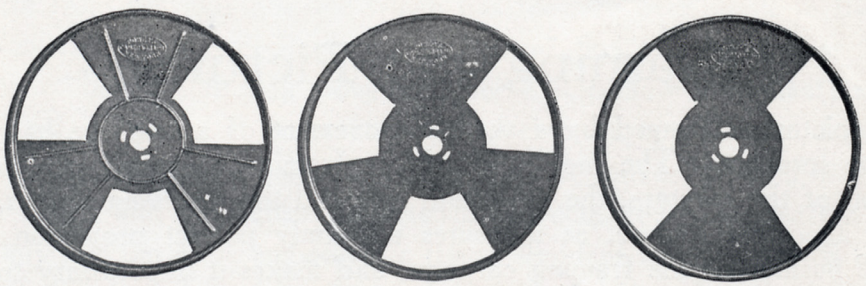


Fig. 6

The shutter is mounted on a spindle which projects forward from the front plate of the mechanism so that the shutter intercepts the rays of light in front of the projection lens. It should always be set as close to the lens as possible without incurring danger of its striking. The hub of the shutter consists of an inner and outer sleeve. The inner sleeve is directly attached to the spindle by means of a set screw and the outer sleeve is readily adjustable on the inner sleeve to permit quick and accurate setting of the shutter in proper relation to the intermittent movements. Mounted on the hub are the Russia iron wings, which are of three designs, as shown in Fig. 6. The "Regular" three-blade shutter should be used on direct current with moving picture projection lenses of 3½ inch or longer equivalent focus. The "Short Focus" three--blade shutter should be used on direct current with moving picture projection lenses of 3¼ inch or shorter equivalent focus. The two-blade shutter should always be employed where alternating current is used in the lamp.

It is important that the shutter be suitable to the conditions under which the machine is operating, otherwise the best results will not be obtained. Owing to the rapid movement of the film produced by the novel No. 6 movement, the shutter wings are cut narrower than any shutters of similar types on other moving picture machines. Thus brighter illumination on the screen is obtained. As the shutter is mounted in front of the projection lens, a lens of the shortest possible focus may be used. The shutter can be removed from the spindle and replaced without changing its adjustment, and the spindle is so mounted that it may be swung downward until it lies parallel with the front of the mechanism, where it will be protected from injury in shipment.

Power's No. 6A Lamphouse, Lamp, Stand and Special Lower Magazine

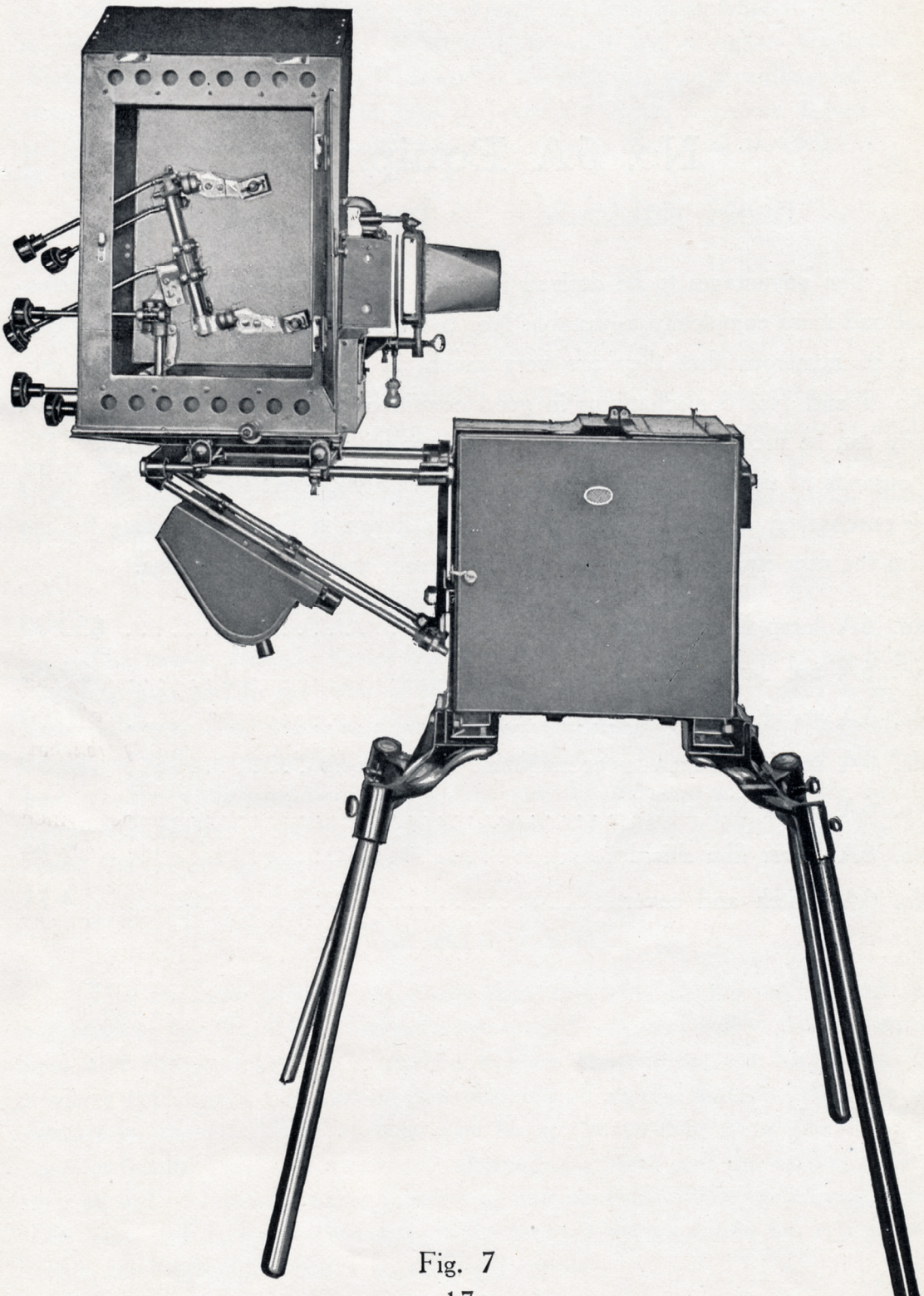


Fig. 7

No. 6A Equipment

The advantages to be derived from the use of the heavier, more substantial and more completely adjustable No. 6A arc lamp, lamp house, stand, etc., are so numerous that they are very much in demand. Those who own No. 5 and No. 6 mechanisms in good condition will be pleased to learn that they can be used with the No. 6A equipment with excellent satisfaction. The thousands of users of No. 6 machines can readily convert them into No. 6A's by purchasing, at the following prices, parts shown in Fig. 7, retaining for use with the new equipment, their mechanism, lenses and upper magazine.

No. 6A lamp house, complete	$30.00
No. 6A arc lamp	25.00
No. 6A stand	20.00
No. 6A special 14 inch lower magazine with take-up	19.50
No. 6A upper film shield	.75
No. 6A lower film shield	2.50
No. 6A switch and cover	4.75

Power's Cameragraph No. 6

Power's Cameragraph No. 6 having the same mechanism or head as the No. 6A projects pictures which are as steady and free from flicker. The lamphouse, lamp and stand are of different design and are of lighter construction. This makes the No. 6 especially desirable for lecturers and travelling exhibitors who have frequent occasion to take the machine apart, transport it and set it up again. Its design lends itself most admirably to that class of work.

The Mechanism or "Machine Head"

Same as described on page 12.

The Lamp House

The lamp house is of substantial construction, with removable top and back. Doors are provided on both sides and made as large as possible to afford ready access to any part of the lamp. The sliding ways consist of substantial rods, affording all necessary forward and backward, as well as lateral movement needed in focusing for stereopticon and moving picture projection.

Condensers and Support

The two condensing lenses are carried in a rectangular box which is permanently attached to the front of the lamphouse. Each lens is held in a separate holder or clip, which can be instantly removed in case of breakage of the condenser without disturbing the other condenser. The lenses are of the very best quality triple annealed lead glass, and the holders or clips are so designed that perfect freedom of expansion and contraction is permitted, thus lessening the danger of breakage.

The Arc Lamp

The arc lamp is more adjustable than any other on the market with the exception of our No. 6A. The parts are made heavy and will withstand intense heat and heavy strain. The carbon holders (patent applied for) have 75 amperes capacity. The carbons are clamped so rigidly that perfect electrical contact is assured. The carbons can be set in position to secure the best possible results with both direct and alternating current and the carbon holders may be shifted laterally, either together or independently while the current is on. The back and forward movement of the lamp is accomplished by a rack and pinion, insuring quick adjustment and rigid support.

The Rheostat

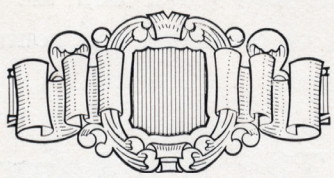
The rheostat furnished with POWER'S CAMERAGRAPH No. 6 is either adjustable or non-adjustable, as desired, and is of either the grid or wire coil type. The rheostats regularly furnished are calculated to supply at least 25 amperes of current on 110 volt circuit. The resistance elements are of ample size to insure long service.

The Machine Table

The table or stand has a top of oil finished walnut and is mounted on a set of telescoping legs of steel tubing, heavily nickel plated. These fit into rigid iron leg sockets or flanges in which they are tightly clamped by set screws. To insure rigidity a set of floor sockets are also furnished.

The Projection Lenses

For a description of the projection lenses used in Power's No. 6, see page 45.



Power's Cameragraph No. 6

Complete Equipment

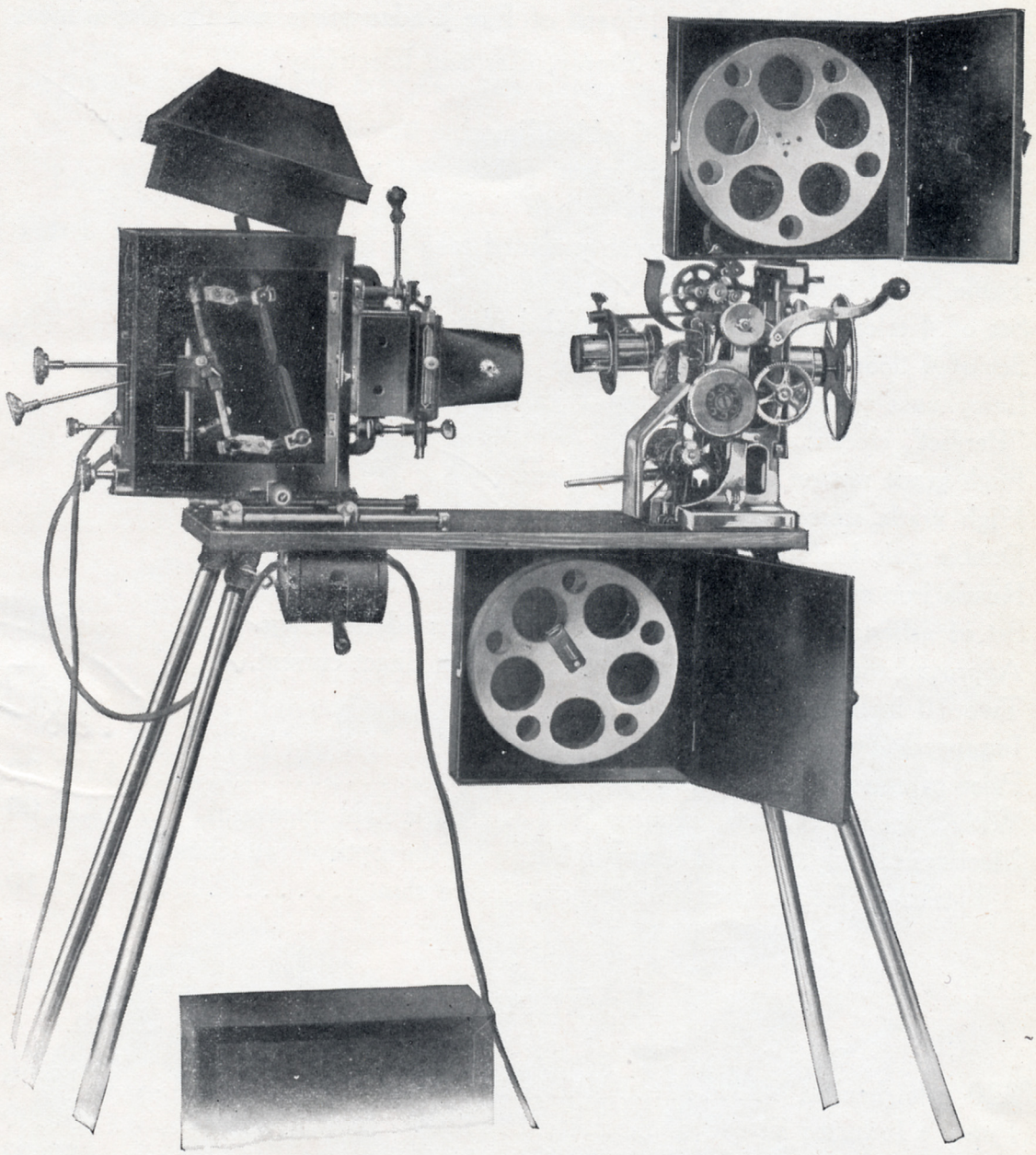


Fig. 8

Power's Cameragraph No. 6

Complete Equipment

Approved by the New York Board of Fire Underwriters and the Department of Water Supply, Gas and Electricity.

Cameragraph mechanism No. 6 with adjustable stereopticon attachment.
Style B, automatic fire shutter, upper and lower film shields.
12 inch upper film magazine.
12 inch lower film magazine with patented take-up attachment.
Table board with leg flanges.
Set of 4 telescoping tubular legs, nickel plated.
Set of 4 floor sockets.
Lamphouse complete with sliding ways, condensers, slide carrier, etc.
"Perfect" electric arc lamp.
High grade motion picture objective lens.
High grade stereopticon objective lens.
Double pole knife switch with slate base.
Russia iron switch cover.
Set of asbestos covered wire connections with solderless lugs.
Approved rheostat for 110 volts alternating or direct current.
Two 10 inch reels.
Improved film rewinder.

Price complete, as listed	$225.00
With Standard calcium burner instead of electric light apparatus	215.00
Mechanism only, without lenses,, but with stereopticon attachment, take-up feed and Style B automatic fire shutter	132.50

Additional For

220 volt rheostat	$ 18.00
Power's Inductor instead of rheostat	50.00
Power's Little Giant Current Saver instead of rheostat	30.00
Dissolving View Stereopticon Attachment	125.00
Automatic Loop Setter	10.00

(For table of allowances, see page 54.)

Power's Cameragraph No. 5

This equipment has been before the public for some nine years; and during much of that period has been the standard of excellence in moving picture machines.

It is lighter and more compact than the No. 6 and No. 6A machines, and therefore is not so well adapted to heavy service. In material, workmanship and finish it is of the same high grade. It is of attractive design, noiseless in operation, easy to run. The pictures projected are clear, steady, brilliant and practically without flicker. The No. 5 Cameragraph will commend itself for use where pictures are only shown occasionally; also to exhibitors who do not wish to invest as much in their machine equipment as would be required for the purchase of a No. 6 or No. 6A Cameragraph.

No. 5 Head with Reel Hanger and Front Take-up

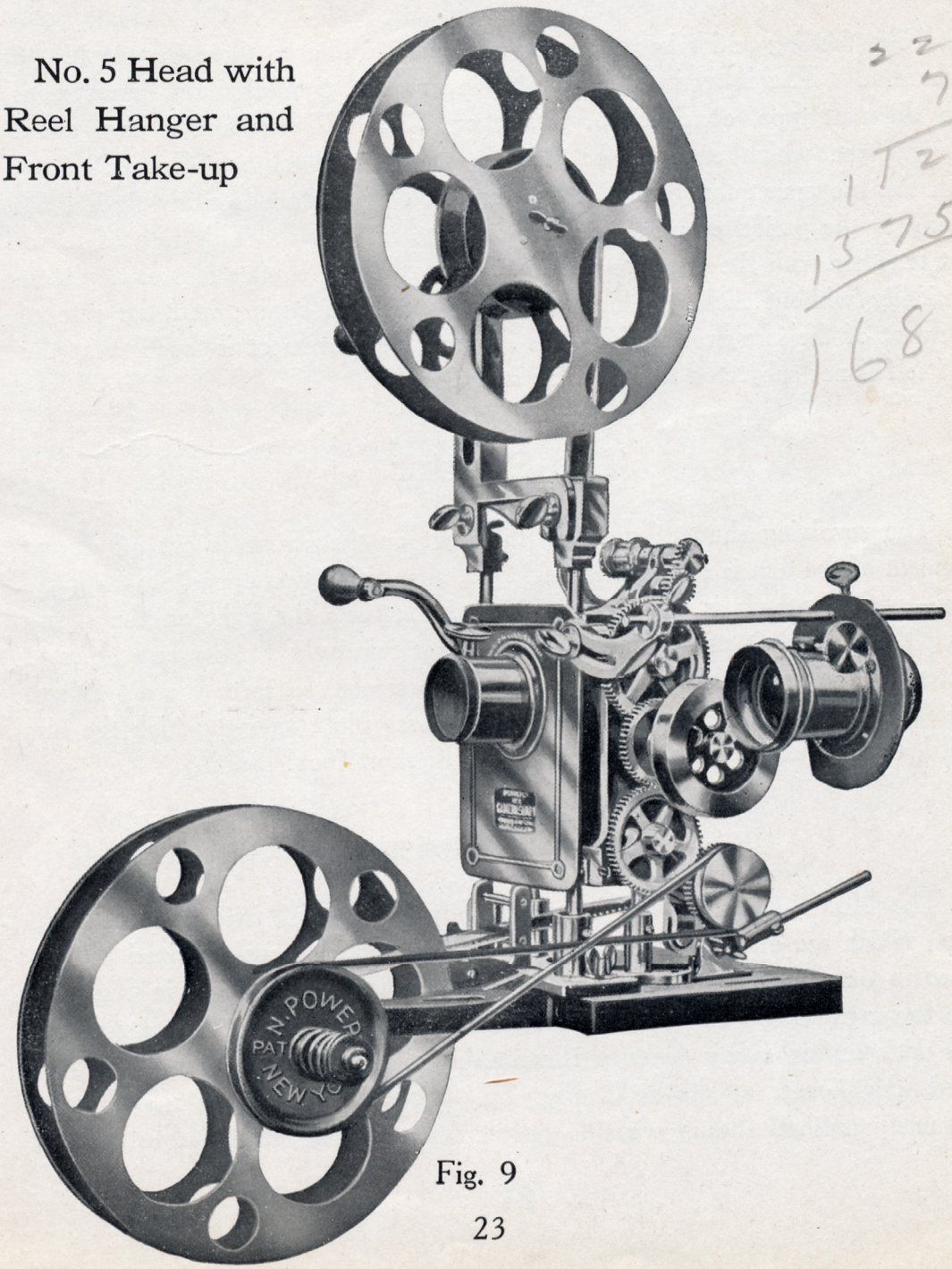


Fig. 9

The No. 5 Mechanism or Head

The general appearance of the No. 5 mechanism is shown in Fig. 9. With it is shown the reel hanger and front take-up, which, however, are but little used now and are not recommended, as they have been succeeded by the fireproof film magazine, which should always be used, even though the machine is installed in places where the law does not require such protective devices.

Film Feeding and Take-up Devices

Film feeding and take-up devices are quite similar to those on our No. 6 mechanism. The intermittent movement in our No. 5 mechanism, however, is of a different type, consisting of a star or "Geneva" stop and a cam wheel with one pin which engages the slots in the star wheel or "Geneva" stop. With this movement the period of exposure of each picture is made three times as long as the period of movement between the exposures. This rate of movement together with the effective action of the revolving shutter insures a picture practically without flicker, which does not cause eye strain; and the rate of movement of the film produced by this intermittent movement is such that the film itself is not subjected to an undue strain.

The Shutter

The revolving shutter by which the light on the screen is cut off during movement of the film is of the balanced type, comprising two oppositely arranged wings—one of which is relatively wide and obstructs the light on the screen during the movement of the film, and the other relatively narrow and adapted to interrupt the light while the picture is on the screen, so as to prevent flicker. This shutter is mounted close to the steel aperture plate against which the film is held, thus making it possible to use lenses of short focal length.

Lamp Houses

The No. 5 Cameragraph is furnished with either of two styles of lamp houses, which are alike in their principal features, but are characterized by difference in details of construction. The regular lamphouse shown in Fig. 25, is the lower priced of the two styles and gives excellent service, but is not provided with certain safety features characterizing the other, or New York Approved, lamphouse, as shown in Fig. 26. Each design is provided with handsomely finished sliding ways to permit forward and lateral adjustment of

the lamphouse. Both are constructed of the highest grade of Russia iron and are provided with condenser cells or mounts arranged to hold two 4½ inch diameter condensers. At the front of each style of lamphouse a dowser is arranged directly in front of the condensers where it can be conveniently operated to cut off the light from the picture when it is desired for any reason to do so. Directly in front of the dowser is mounted the support for the slide carrier; and this support is provided with a Russia iron cone which serves to cut off side rays of light which would otherwise be very annoying to the operator. The principal difference between the two lamphouses, however, is found in their tops.

The regular lamphouse is provided with a simple flat top with supporting flap, as shown in Fig. 25, while the New York Approved design is provided with a top in the form of a hood, which rises four inches above the main body, thus permitting the use of longer carbons without leaving the top of the lamphouse open. This hood is lined with mica to prevent the possibility of a short circuit by contact of the upper carbon with the top of the lamphouse. It is also provided with perforated side plates to insure perfect ventilation.

Electric Lamps

The Power's No. 5 Cameragraph is equipped for the use of electric current, and the arc lamp regularly supplied is of the design illustrated in Fig. 29, which is known as our "Regular" arc lamp. This is a simple, staunch and inexpensive lamp, provided with sufficient adjustment to enable a capable operator to properly handle either alternating or direct current, in such manner as to insure proper light on the screen. A special feature of this lamp is the form of the carbon holders which we illustrate in Fig. 30. It will be noted that the binding post for attaching the electric conductor is placed at the end of an arm extending rearwardly from the jaws between which the carbon is held, thus preventing the conductor from becoming excessively hot and insuring long service of the terminal lugs or connectors.

When especially ordered, the No. 5 Cameragraph is fitted with Power's "Perfect" arc lamp, which is shown in Fig. 31.

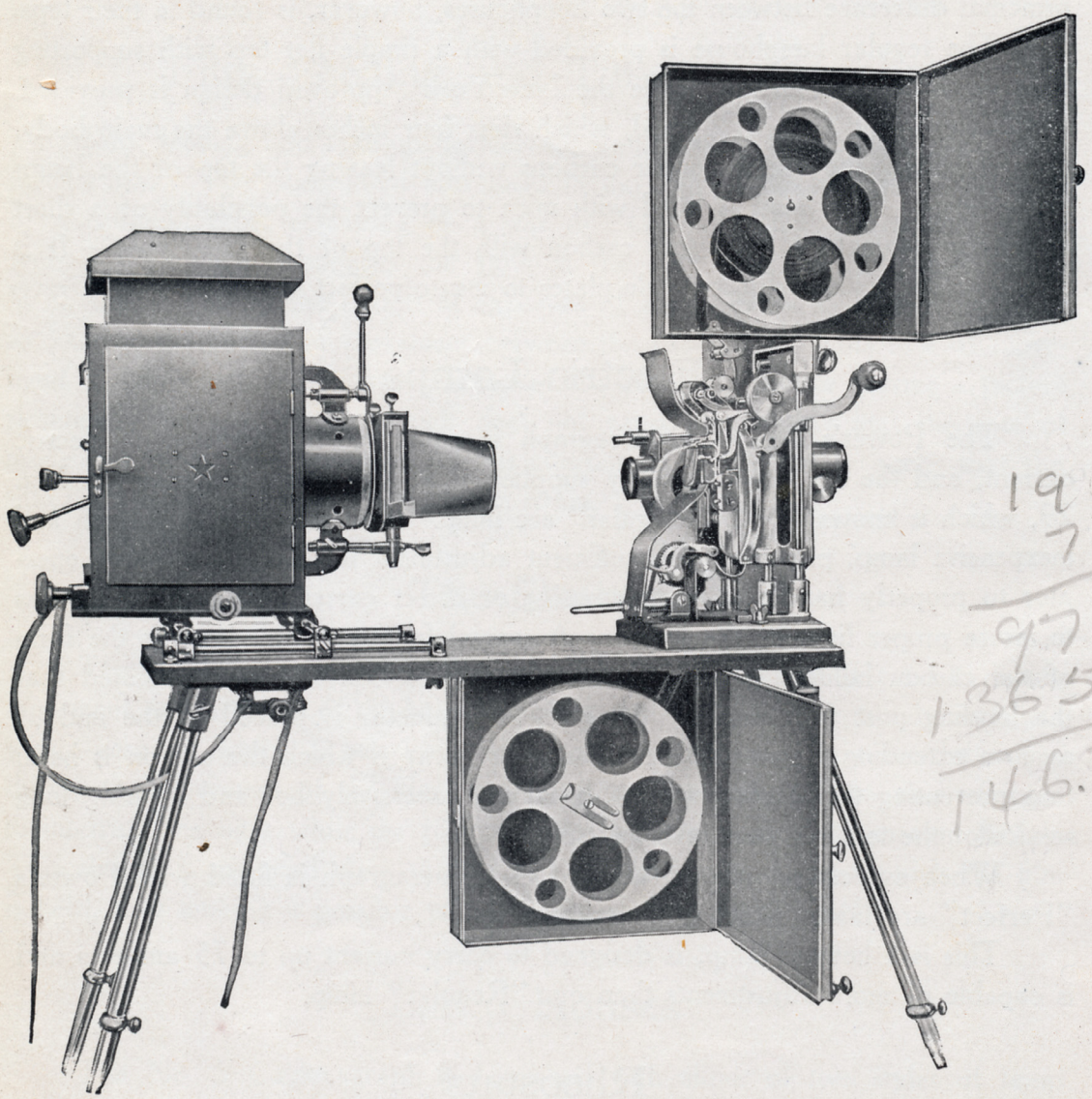
This is a heavier lamp, is designed to carry current up to 75 amperes and is capable of more adjustments than our "Regular" lamp.

Rheostats

The rheostats regularly furnished with Power's Cameragraph No. 5 are of the resistance wire type, designed for 25 amperes on 110 volts. They are furnished in two styles. The Underwriters, or 25 ampere non-adjustable type, and the open 25 ampere adjustable rheostat, both of which are described and illustrated under "Rheostats,' page 35.

Power's Cameragraph No. 5

New York Approved Equipment With Style B Automatic Fire Shutter.



195
75
975
1365
146.25

Fig. 10

Pages 27 and 28 Missing

Pages 29 and 30 Missing

No. 5 Regular Equipment

Cameragraph Mechanism No. 5 with stereopticon attachment.
10 inch upper film magazine.
10 inch lower film magazine with patented take-up attachment.
Table board with leg flanges.
Set of 4 telescoping tubular legs, nickel plated.
Regular lamphouse complete, with sliding ways, condensers, slide carrier, etc.
Electric lamp complete.
High grade motion picture objective lens.
High grade stereopticon objective lens.
Double pole knife switch with slate base.
Set of asbestos covered wire connections with solderless lugs.
Open 25 ampere adjustable rheostat (Fig. 16, page 35) for 110 volt alternating or direct current.
One reel hanger with winding attachment for 10 inch reel.
Two 10 inch reels.

Price complete, as listed	$175 00
Regular equipment, with Standard calcium burner instead of electric light apparatus	165.00
Mechanism only, without lenses and automatic fire shutter, but with take-up feed and stereopticon attachment	90.50

Additional For

Underwriters' rheostat (Fig. 17), or enclosed 25 ampere adj. rheostat	$ 2.00
110 volt, 25-40 ampere adjustable covered grid rheostat (Fig. 18)	8.00
240 volts adjustable covered rheostat	20.00
Power's Adjustable Inductor (Fig. 23) instead of rheostat	50.00
Power's Little Giant Current Saver (Fig. 24) instead of rheostat	30.00
Power's "Perfect" arc lamp instead of "Regular"	7.00
Dissolving view attachment	125.00

(For table of allowances, see page 54.)

Accessories

Automatic Fire Shutters

The most important accessories or details of equipment are those which are intended for the protection of human life. Eight or nine years ago Mr. Power designed, and has since continuously used two styles of automatic fire shutter, known as Style A, Fig. 13, and Style B, Fig. 14.

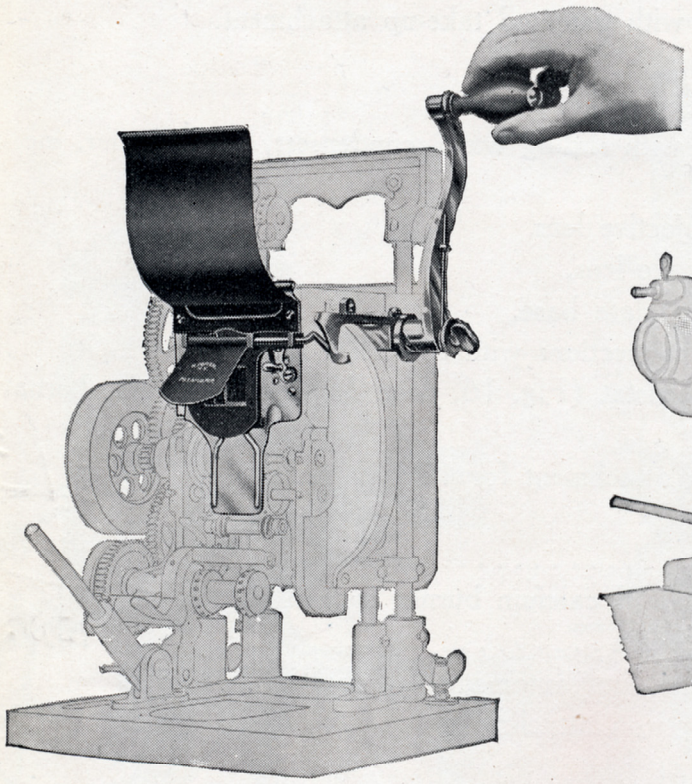


Fig. 13

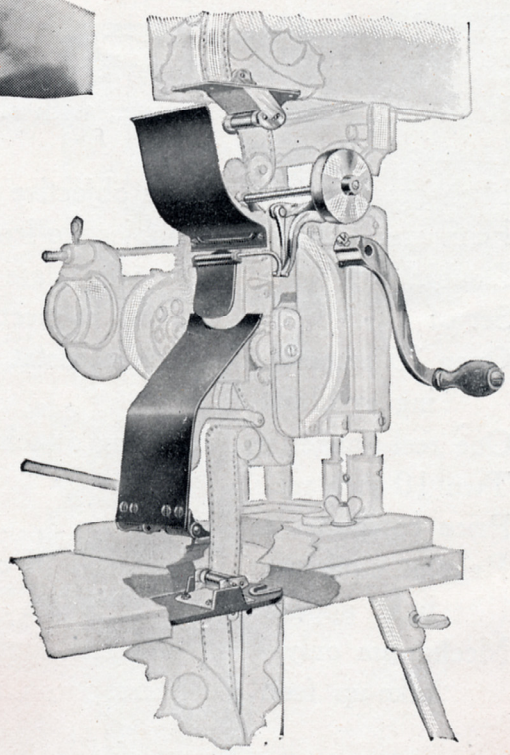


Fig. 14

STYLE A AUTOMATIC SHUTTER is especially adapted for hand-power mechanisms and is always furnished with an upper film shield for the protection of the upper film loop. This automatic shutter is operated by means of a lever, mounted on the right hand side of the mechanism, which is forced inward by the crank as power is applied thereto, for operation of the machine. The crank is loose on its shaft and is formed with a sleeve having a cam slot in which a pin on the crank shaft works. The inclination of the slot is such that when power is applied, the crank is forced inward against a lever by means of which the automatic shutter is opened. When the pressure on the crank is removed, springs act on both the lever and the crank to restore them to normal condition, allowing the automatic shutter flap to drop and cut off the light from the film.

This style of automatic shutter operates with very little friction and without noise. It is not adapted for use on motor driven machines, and is not dependent upon the speed of operation of the machine for its action. It is approved by the authorities in all localities where speed-controlled shutters are not required.

Price with upper film shield, only $8.00
Price of lower film shield 1.50

THE STYLE B AUTOMATIC SHUTTER is designed for mechanisms operated by either hand power or electric motor. Its action depends upon the speed at which the machine is operated. The operating mechanism consists of a centrifugal clutch and a lifting lever controlled thereby. This clutch is mounted on a spindle geared to the film feeding device and rotated at a corresponding speed. As soon as the travel of the film reaches proper exhibiting speed, this clutch operates and moves the lever so as to elevate the shutter flap, which is pivoted on the gate of the mechanism over the projection aperture. When the speed of the film decreases, the clutch is automatically released and the weight of shutter causes it to drop into normal position, thus covering the projection aperture.

The Style B automatic shutter is supplied with both upper and lower film shields.

Price of Style B automatic shutter, with No. 6 upper and lower film shields. . . . . $ 12.00
Price of Style B automatic shutter, with No. 6A upper and lower film shields. 13.25
Price of No. 6A upper film shield only ..... .75
Price of No. 6A lower film shield only 2.50

Fireproof Film Magazines

Among the safety devices supplied with Power's Cameragraphs the Fireproof Magazines are hardly less important than the Automatic Fire Shutter. These magazines are designed to afford complete protection to the film on both the supply and take-up reels. They consist essentially of square, heavy gauge Russia iron boxes, mounted on suitable supporting brackets and equipped with patent film valves through which it is impossible for flame to pass. A set of magazines includes the upper and lower. The general arrangement of these magazines and automatic valve is shown in Fig. 15.

A feature of the lower magazine to which we wish to call special attention is the patented take-up device designed to wind the film on the lower reel. It is so designed that uniform film tension is at all times maintained, regardless of the quantity of film on the take-up reel. The tension is easily regulated and is such that there will be no excessive strain on the film. This patented take-up device is designed to be driven by a round, leather belt, running over a grooved pulley on the mechanism. Where the law requires it, or there is a special demand for it, we can furnish the take-up designed to be operated by a chain, driven by a sprocket on the mechanism. Power's Fireproof Magazines are supplied in three sizes, for 10, 12 and 14 inch reels.

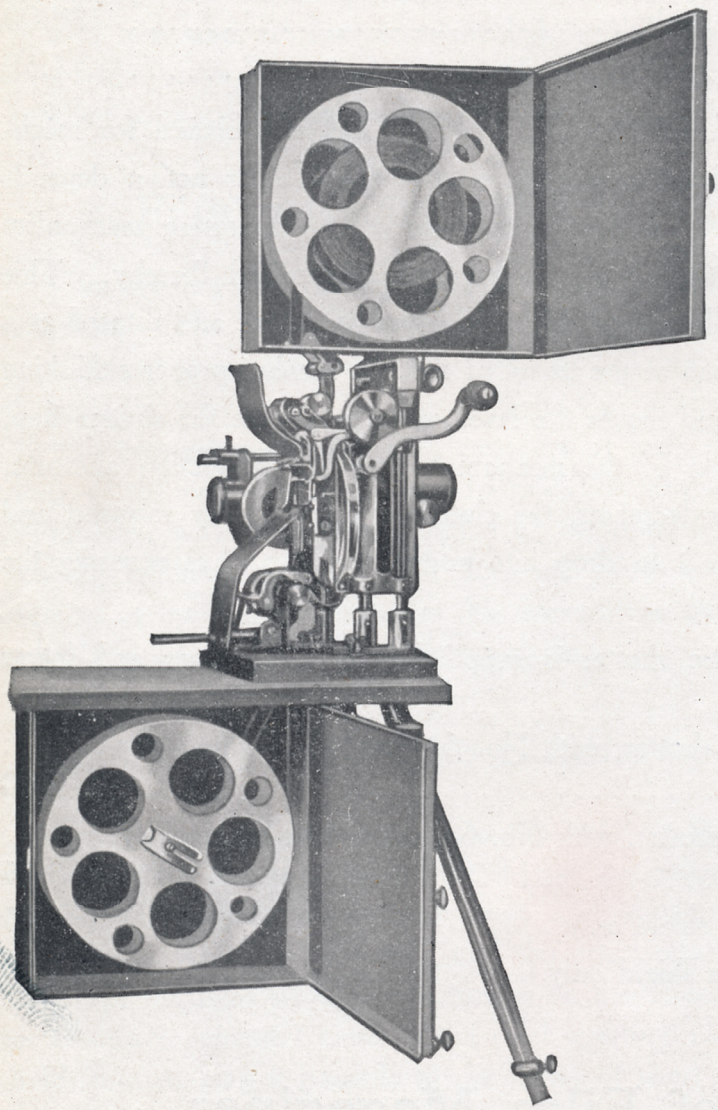


Fig. 15

10 inch upper magazine	$10.00
10 inch lower magazine, with take-up device	17.50
12 inch upper magazine	11.00
12 inch lower magazine with take-up device	18.50
14 inch upper magazine	12.00
14 inch lower magazine with take-up device	19.50
Additional for sprocket where chain drive take-up is used	2.50

Rheostats

Rheostats should never be used on alternating current for permanent installations. They are very wasteful, and are therefore recommended only for use on direct current circuits where transformers cannot be used. For alternating current Power's Inductor, or current saver should be used (see pages 37 and 38).

The smallest and least expensive of our line of rheostats is the open, 25 ampere adjustable rheostat, Fig. 16. It is designed for use on 110 volts, direct or alternating current, and will carry 25 amperes without overheating. As the rheostat is entirely open, there is ample radiation. The coils are so supported that any of them can be replaced when desired. The adjustment is effected by means of a lever switch. This rheostat has been very popular for the past ten or twelve years. Where 40 to 50 amperes is required, two of the 25 ampere adjustable rheostats, connected in multiple, will be found inexpensive as to first cost and very satisfactory in operation.

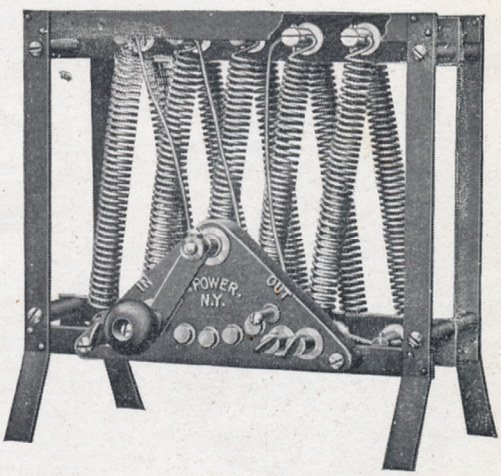


Fig. 16

25 ampere open adjustable rheostat, Fig. 16 ..... $10.00
With perforated Russia iron cover, similar to Fig. 17 ..... 12.00

Our Underwriters' 25 ampere rheostat is shown in Fig. 17. It has the same number of resistance coils as the 25 ampere adjustable rheostat and is built in a similar frame. It is not, however, adjustable, and is always enclosed in a perforated iron cover. It is designed for operation on 110 volts, alternating or direct current.

Price. $12.00

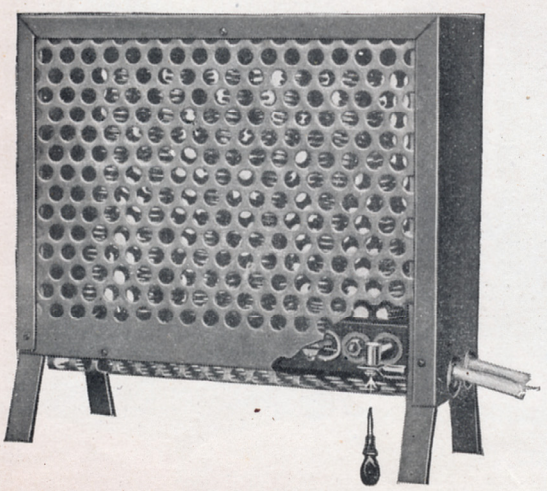


Fig. 17

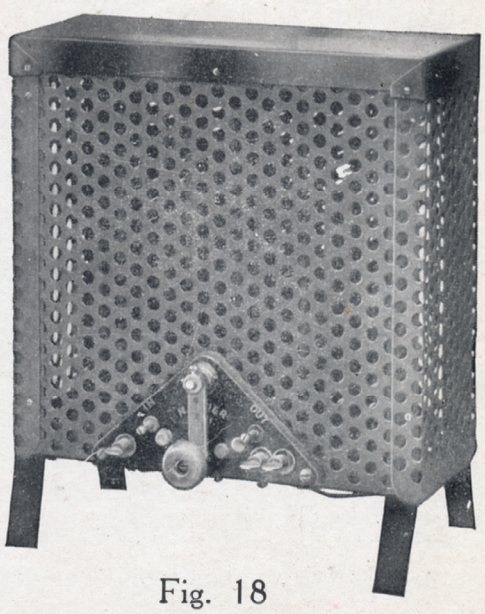


Fig. 18

Our most popular rheostat is the 25 to 40 ampere 110 volt, iron grid rheostat. (See Fig. 18). The resistance units are of gray cast iron, designed to carry, without undue heating, as high as 40 amperes. Their unique design permits of maximum radiating surface. The deterioration due to frequent heating and cooling is not as great with this style of resistance material as it is with resistance wire. This rheostat fills the demand for a single rheostat delivering high amperage, and is recommended for moving picture projection on direct current.

Price. $18.00

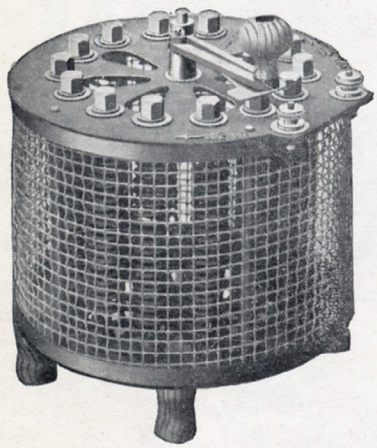


Fig. 19

The 120 volt circular rheostat, illustrated in Fig. 19 has coils of heavier resistance wire than the 25 ampere rheostat, and is intended to safely carry 30 to 35 amperes. It is of light but substantial construction, and well ventilated.

Price. $20.00

Occasionally there are conditions which demand amperage as high as 70 to 75. We have designed an iron grid rheostat with a normal rating of 75 amperes on 110 volts, which has been used satisfactorily for the projection of Kinemacolor pictures and in many other installations where such an amperage is wanted. This rheostat is illustrated in Fig. 20.

Price. $35.00

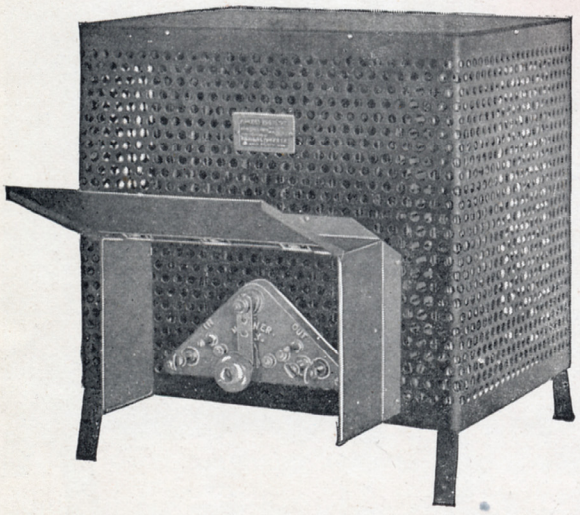


Fig. 20

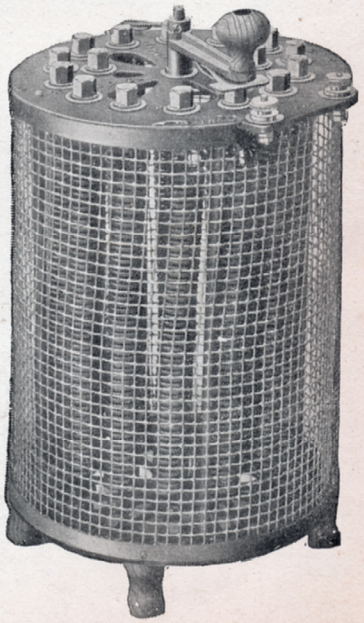


Fig. 21

The 220 volt circular rheostat, Fig. 21, is similar in design to the 120 volt circular rheostat, but the coils of resistance wire are longer and it is adjustable for use on any voltage from 60 to 250. The coils will safely carry 35 amperes and are so arranged that the removal of a jumper quickly divides the rheostat into two parts, each of which then becomes a regular 110 volt rheostat, which can be used independently of the other half or in multiple. When used in multiple on 110 volts the two halves will produce a maximum of 50 amperes. They must, however, always be operated in series when operating on 220 volts, which provides a maximum amperage of 35. On account of its wide range of voltage and amperage and its light weight, but substantial construction, it is specially recommended to travelling exhibitors.

Price. $30.00

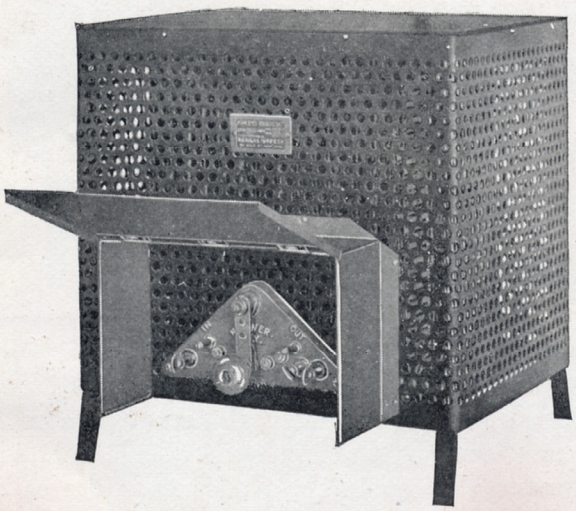


Fig. 22

For permanent installation on 220 volts, we recommend the 220 volt iron grid rheostat, Fig. 22. It has all the characteristics of the iron grid rheostates described heretofore, and will be found very satisfactory and enduring in actual service.

Price, without cover. $30.00
Price, with cover. 32.50

Where the law requires it, a Russia iron cover, such as is illustrated in Fig. 22, will be furnished for the adjusting switch and terminals in any of the above rheostats, except the circular types.

Additional price for switch cover $2.00

Electric Current Savers for Alternating Current

When it is considered that, on alternating current, the hand feed arc lamp as used in all moving picture machines, uses only 30 to 35 volts at the arc, while the electric current is supplied at from 104 to 250 volts, it becomes obvious that there is an extremely large percentage of current wasted unless some means can be employed, of transforming, or converting, without loss, the line voltage as supplied by the electric light plant into current at a suitable voltage for the arc

lamp. Power's Adjustable Inductor, Fig. 23, and Power's Little Giant Current Saver, Fig. 24, are double coil transformers, built upon a principle which is well known to all electrical engineers and are conceded to accomplish the results claimed for them.

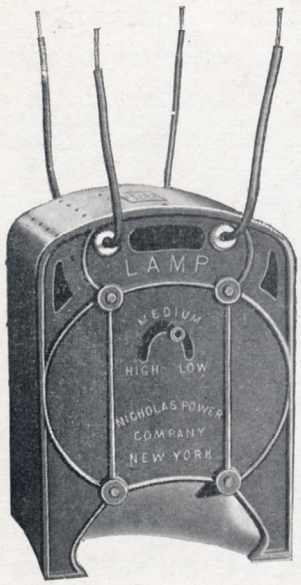


Fig. 23

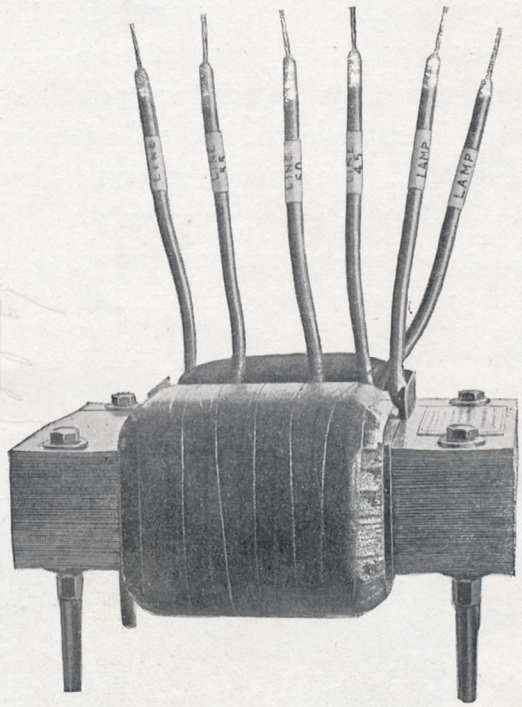


Fig. 24

These transformers are designed to secure the maximum economy of current, the absence of noise when in service, the elimination of heat which is so objectionable in all rheostats, and the most perfect arc regulation obtainable. In the last respect especially, they are undoubtedly superior to any other device of the same class on the market today. This results from the special "stray-field" type of transformer used, and insures the maintenance of a satisfactory light with less frequent feeding of the carbons than is possible with any other type of transformer. It is the universal experience of all purchasers of either Power's Inductor or Power's "Little Giant" current saver that all the objects contemplated in the design of these instruments have been realized. The saving of current on 110 volt circuits amounts to 60 per cent. or more; on 220 volt circuits to 80 per cent. or more. Both instruments are built for frequencies of 60 and 133 cycles and for voltages of 104 to 130 volts or for 208 to 260 volts. The amperages delivered at the arc are approximately 45, 55 and 65.

In ordering either type of current saver specify exact voltage and number of cycles of current, the length of throw and size of picture to be produced.

Power's Inductor is the highest class instrument of this character on the market to-day, being a "stray-field" transformer enclosed in a strong and handsome cover, designed to afford protection to the transformer, together with ample ventilation. The amperage delivered at the arc is controlled by a three-point switch mounted inside the casing, with an operating handle extending through so as to be conveniently accessible.

Price, Fig. 23 ..... $60.00

Power's "Little Giant" current saver comprises the transformer without any casing and without any switch to control the amperage at the arc. The "Little Giant" is mounted on heavy legs, which support it several inches above the floor. Instead of a switch to control the amperage at the arc, the "Little Giant" is provided with a plurality of leads for connection with the wall switch, each lead being marked to show the amperage obtainable when that lead is used.

Price, Fig. 24 ..... $40.00

Lamp Houses

The "Regular" lamp house shown in Fig. 25 is the smallest and cheapest one made by us. It is not provided with certain safety features characterizing the other designs, and for that reason is not approved by the municipal authorities in New York and Chicago, but may be used practically everywhere else. We can conscientiously recommend it for stereopticon work and for moving picture projection wherever the work is of intermittent or infrequent nature. It is not intended for continuous and hard service. It is made of high-grade Russia iron and furnished complete, with sliding ways affording ample forward and backward and lateral adjustments, condenser mount with condensers, wooden slide carrier, dowser, etc. It is provided with one door.

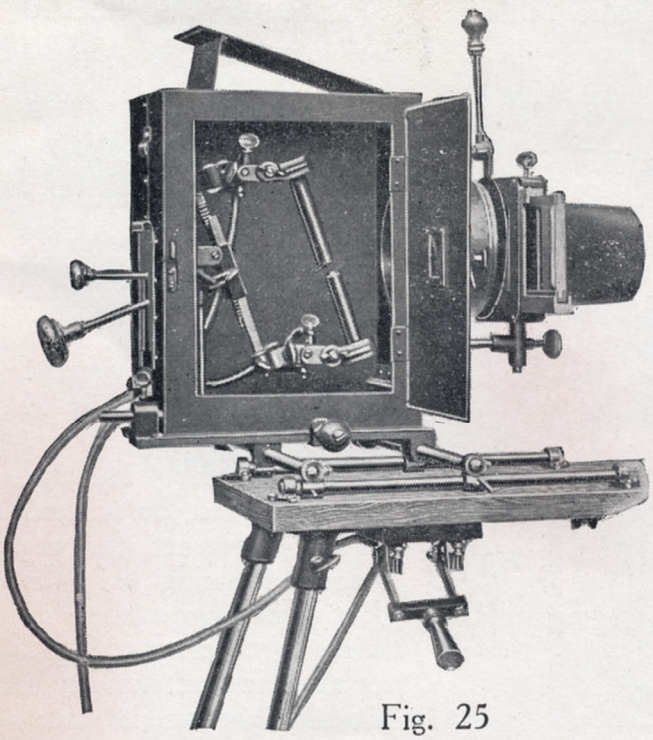


Fig. 25

Price "Regular" lamp house $20.00

Price "Regular" lamp house with "Regular" arc lamp..... 28.00

Price "Regular" lamp house with "Perfect" arc lamp..... 35.00

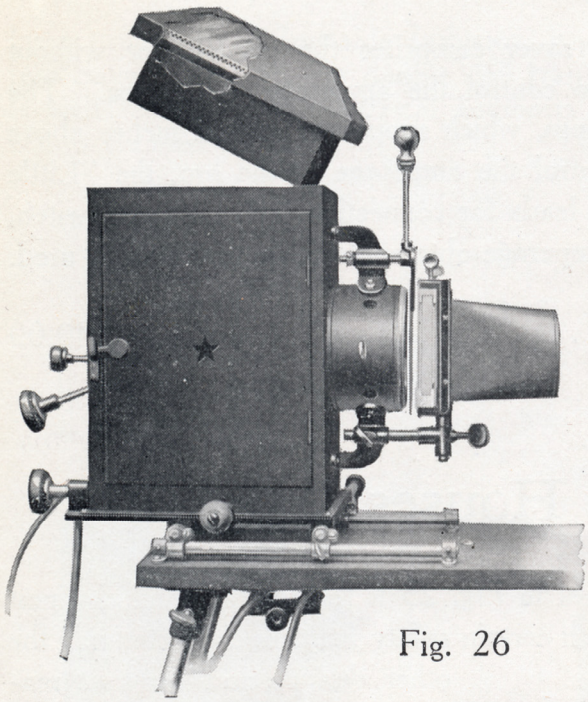


Fig. 26

New York Approved

The New York Approved lamp house, Fig 26, is provided with a mica lined hood to prevent short circuit by contact with the carbons. It is also provided with perforated side plates to insure perfect ventilation. In other respects it is the same as the "Regular" lamp house.

Price New York Approved lamp house	$26.00
Price New York Approved lamp house with "Regular" arc lamp..	34.00
Price New York Approved lamp house with "Perfect" arc lamp...	41.00

The No. 6 lamp house, Fig. 27, is larger than the two preceding ones and has a removable top and back. Doors are provided on both sides and are made as large as possible to afford ready access to every part of the arc lamp. The lamp house is mounted on a heavy cast base, carried by a set of adjustable sliding ways, which provide forward and backward, as well as lateral movement for the proper focusing of the light. The two condensing lenses are carried in a rectangular box, having a hinged door on its side, permitting the instant removal of the condensers in their separate holders or clips. In case of breakage, one condenser can be quickly removed and replaced without disturbing the other. The dowser is

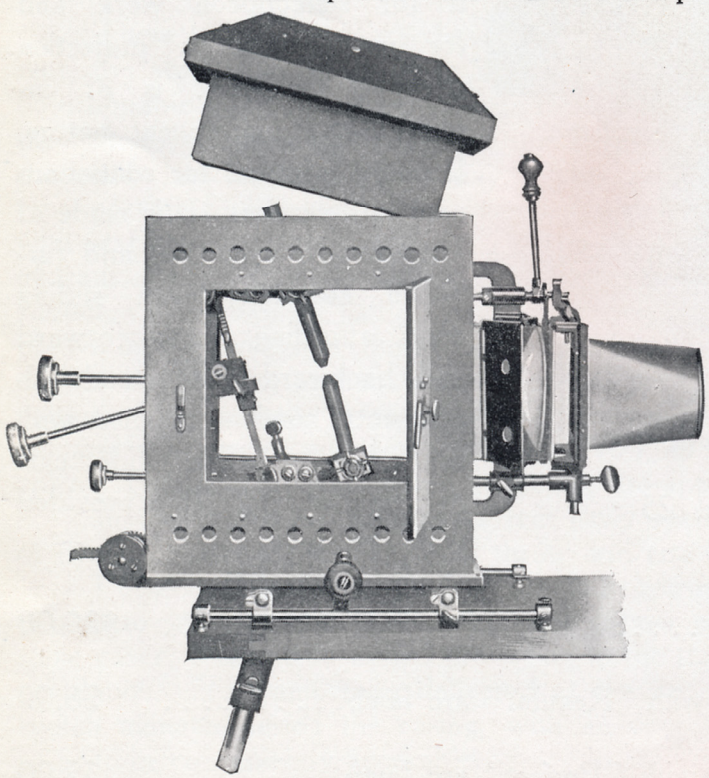


Fig. 27

mounted in front of the condensers and serves to shut off the light when the machine is not in operation, or while stereopticon slides are being changed. The slide carrier is made of sheet steel of heavy gauge and is of the latest design. Only the No. 6 or "Perfect" arc lamp can be used in the No. 6 lamp house.

Price No. 6 lamp house, complete $26.00
Price No. 6 lamp house, complete, with No. 6 lamp..... 41.00

The No. 6A lamp house, Fig. 28, is our very latest and best design and is recommended for professional work in permanent installations. It is made of extra heavy Russia iron, of generous overall dimensions, and is particularly well ventilated. The top is practically all of perforated metal, allowing the hot air and gases from the arc to readily escape. A hinged cover, supported with side pieces, protects the perforated metal top and directs the hot air and gases away from the operator. The back of the lamp house is practically all enclosed, the small holes provided for the adjusting handles on the arc lamp being all of but slightly larger diameter than the rods passing through them. This is made possible by the universal joints on the various arc lamp adjusting handles. Heavy sheet mica properly placed prevents short circuits by reason of contact of the carbons with the lamp house. The sliding ways are of extra heavy rods, while the condenser mount and slide carrier are of the same design as have made the No. 6 lamp house so popular. The dowser is operated by a handle from underneath; and as it swings down instead of up, it is not in the way when handling the stereopticon slides. This will be appreciated by operators. Only the No. 6A arc lamp can be used in the No. 6A lamp house, and on account of its weight and heavy sliding ways, it is recommended that the No. 6A lamp house only be used with the No. 6A stand.

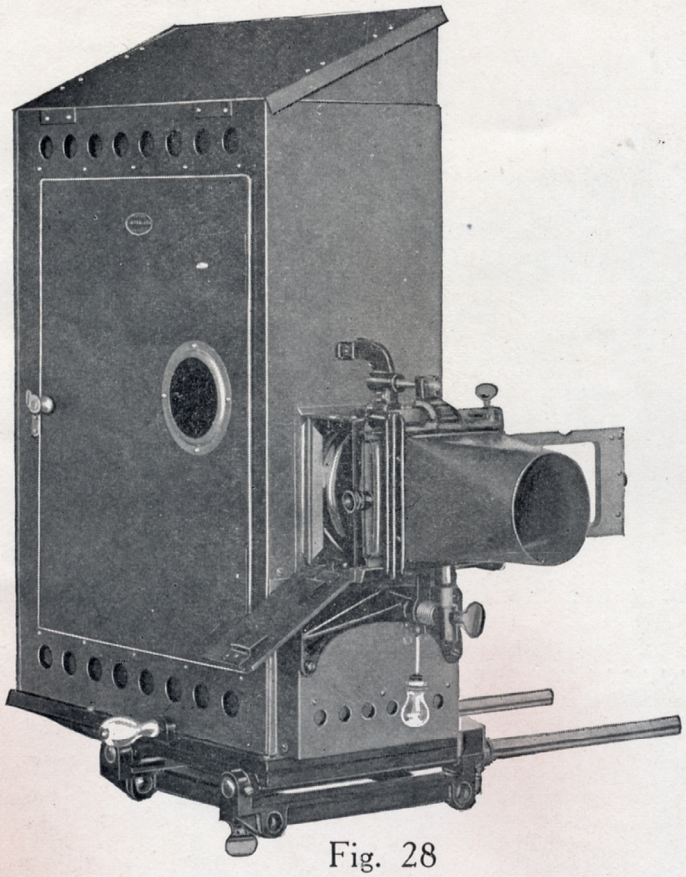


Fig. 28

Price No. 6A lamp house, complete $30.00
Price No. 6A lamp house, complete, with No. 6A arc lamp..... 55.00
Price No. 6A lamp house, arc lamp, stand and special lower magazine 94.50

Arc Lamps

Our "Regular" arc lamp, Fig. 29, has been supplied for many years with our No. 5 machine. It is a simple and inexpensive lamp, provided with sufficient adjustment to enable a capable operator to handle either alternating or direct current and to insure the proper light on the screen. The special feature of this lamp is the form of its carbon holder, which is illustrated in Fig. 30. It will be noted that the binding posts for attaching the wire is at the end of an arm extending backward from the jaws, thus keeping the conductor as far as possible from the heat and gases of the arc.

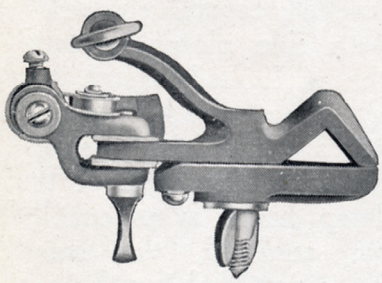


Fig. 30

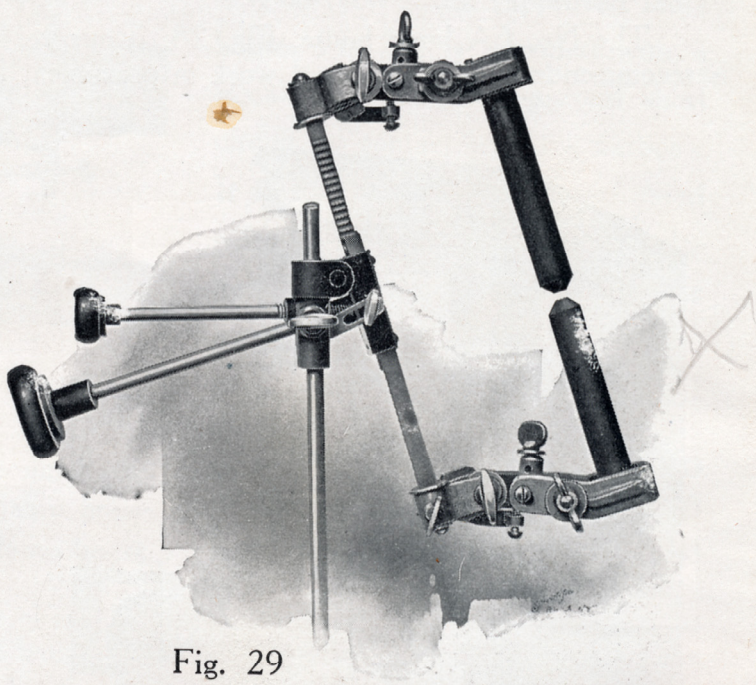


Fig. 29

The "Regular" arc lamp is not intended to carry heavier than 30 to 35 amperes.

Price, without base $8.00

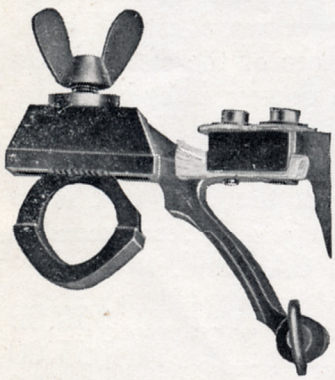


Fig. 31A

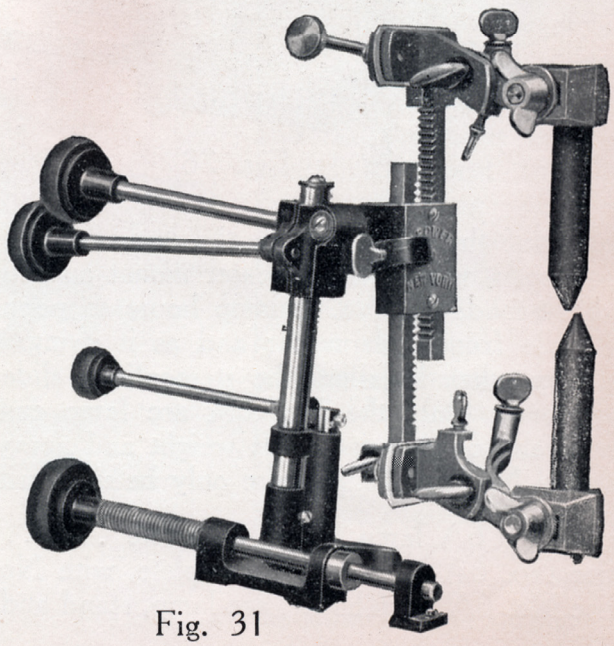


Fig. 31

Power's No. 6 or "Perfect" Arc Lamp, Fig. 31, is much heavier than the "Regular" lamp. It is designed to carry current up to 75 amperes and has better range of adjustment than the "Regular." The cut shows it with the base, which permits its use in the No. 5 lamp house. It will be found the best lamp for use in either our No. 5 or No. 6 lamp houses for professional work.

Price No. 6 or "Perfect" Arc Lamp, complete, with base..... $15.00
Price No. 6 or "Perfect" Arc Lamp, without base..... 14.00

The No. 6A arc lamp, Fig. 32, is the last word in arc lamp design. It has carrying capacity for 100 amperes and is provided with every possible adjustment. All adjustments are accomplished from the outside of the lamp house, thus insuring the greatest safety and ease of operation. It will take carbons as small as 3/8 inch or as large as 3/4 inch in diameter, and of 6 inches length in the lower carbon holder and 12 inches length in the upper carbon holder; thus the carbon waste due to stubs, which have to be thrown away, is reduced to a minimum; also as frequent retrimming is not necessary with the longer carbons, there are less interruptions to the show and less attention is required on the part of the operator. The carbons can be placed at any angle desired. They can be moved independently of each other forward, backward and sideways, or the whole lamp can be swung forward or backward, laterally, and up and down. On account of its large size it can only be used in the No. 6A lamp house. The No. 6A arc lamp is specially recommended for professional moving picture projection where high amperage and long hours of service are the rule.

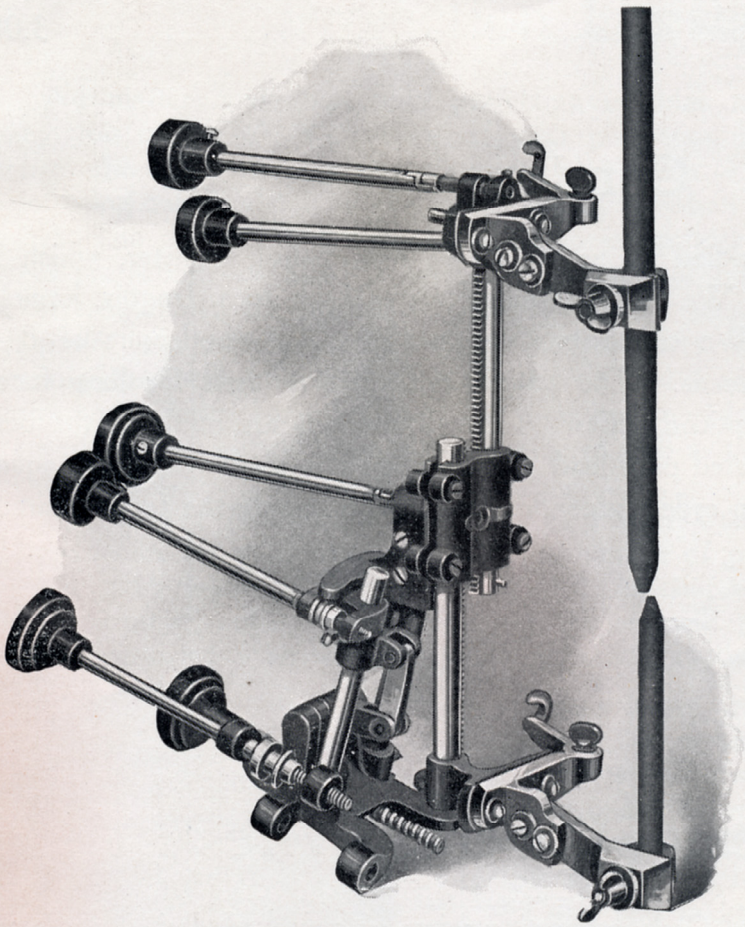


Fig. 32

Price No. 6A arc lamp, complete, with base $25.00

Switches and Switch Covers

The switches supplied with Power's Cameragraphs are of the double pole, single throw type. They are mounted on heavy slate bases and are of two sizes, as listed below. Suitable switch covers of heavy Russia iron, with bushings for the protection of the wires, are furnished. The smaller size switch and switch cover are regularly supplied with the No. 5 and No. 6 machine, while the larger size is furnished with the No. 6A machine.

30 ampere switch	$ .75
Switch cover for 30 ampere switch	1.50
60 ampere switch	1.75
Switch cover for 60 ampere switch	3.00

Condensers

The condensers handled by us are all of 4½ inches diameter, which is the American standard. We regularly carry in stock two focal lengths, namely 6½ and 7½ inches. We can supply, on special order, condensers of 8½ inches and 9½ inches focus. The latter are sometimes used for long focal length M. P. and stereopticon lenses. These condensers are made of the best quality of carefully annealed pure lead glass. They are guaranteed to be equal to any on the market. In ordering condensers, always specify the focus desired.

6½ inch focus	$1.00
7½ inch focus	1.00
8½ inch focus	1.50
9½ inch focus	2.00

Asbestos Covered Wires

We supply National Code connecting wires of approved design, made up of stranded flexible copper conductors covered with and insulated by a heavy, braided asbestos covering. No. 6 wire is recommended for all moving picture projection circuits. The No. 10 wire should only be used for 20 amperes and less.

No. 6 wire, per foot	$ .12
No. 10 wire, per foot	.10

Lugs for Asbestos Covered Wire

Two styles of lugs are carried in stock. The bent solderless terminals, which are commonly used, we do not recommend for currents above 35 amperes. For heavier current we recommend our 60 ampere lug, which is designed for heavy duty. By its unique design, when the asbestos covered wire is attached to it, it does not expose any of the fine copper strands to the heat and gases from the arc., thus protecting it from the oxidization which causes the copper strands to become brittle and break off.

30 ampere, bent solderless lugs, each..... $ .10
60 ampere special heavy duty lugs, each..... .25

Projection Lenses

No matter how good your projecting machine may be, or how much money you spend for film service, if your projection lenses are not the best, much of the effect you are seeking for on the screen will be lost. Poor lenses do not bring out the detail or give the proper illumination of the picture. Realizing what an important factor the selection of proper lenses is in obtaining perfect projection, we have devoted a great deal of time and money in scientific investigations; the net result being a line of lenses which we can offer with pride, at a reasonable price to the moving picture trade. They are made especially for us by the Bausch & Lomb Optical Company, which has been manufacturing lenses for more than half a century, and has connections with producers of the best optical glass in the world, as well as with some of the greatest optical scientists.

We heartily recommend the Nicholas Power Company's special Bausch & Lomb lenses for your use, no matter what make of projecting machine is installed in your theatre. They are made of a superior white optical glass, very carefully ground, polished and corrected. They will produce clearly defined pictures, possessing wonderful sharpness, extending to the very edges.

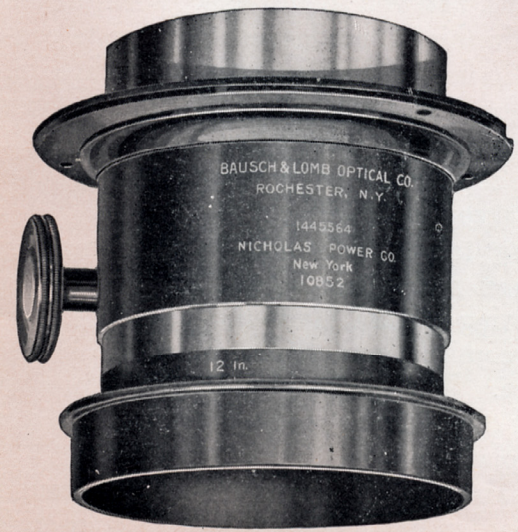


Fig. 33

These lenses are made in the standard diameter for moving pictures, which long experience and scientific investigation have shown to be the best suited to bring about the desired results. This diameter utilizes all the available light coming from the arc, and makes possible that superior correction which produces sharpness. Thus any increase over this diameter would not only be superfluous, as far as illumination is concerned, but actually detrimental from the standpoint of sharpness.

The metal tube in which the moving picture lenses are mounted will fit any standard size jacket, whether equipped with rack and pinion or spiral focusing

attachment. The jacket in which we regularly furnish these lenses complete for moving picture projection, provides for spiral focusing by a very convenient and satisfactory arrangement. When placed on the machine the lens tube should be moved with the fingers backward and forward in the jacket until an approximate focus is obtained. It can thereafter be finally focused by means of a knurled ring on the outer end of the jacket, which turns smoothly and focuses the picture quickly and accurately.

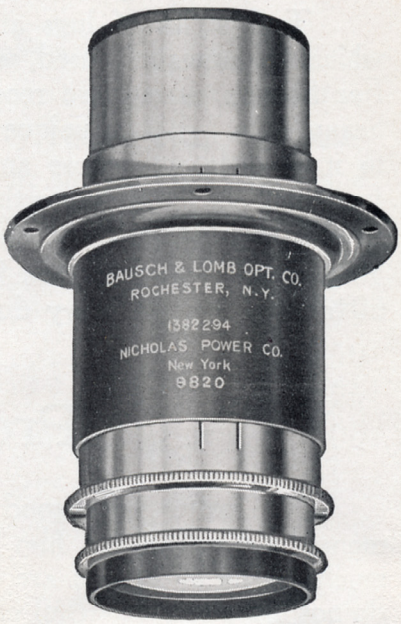


Fig. 34

We furnish lenses for lantern slide or stereopticon work in the two diameters best suited to the range of foci which may be required for this purpose. The quarter size lenses are regularly furnished up to and including 18 inch equivalent focus. The half size lenses are regularly furnished for 20 inch and longer equivalent focus.

In selecting the focal length of your lens there are two elements to be considered. The size of the picture you desire to project, and the distance from the lens to the screen. At a given distance from the screen the shorter the focus of the lens, the larger the picture, and the longer the focus, the smaller the picture. You should bear in mind that the larger the picture is, the less brilliant will be the illumination produced by a given number of amperes of current. Also, that the larger the picture is, or the greater it is magnified, the coarser it will appear on the screen. We recommend brilliant, clear cut pictures of medium size for the most satisfactory results, and you should select a lens of the right focal length to do this at the distance you are to project. A 9 foot by 12 foot picture is about the right size. A 12 foot by 16 foot picture is about the largest you should use, although conditions vary to such an extent that occasionally pictures smaller or larger than stated above may be used advantageously.

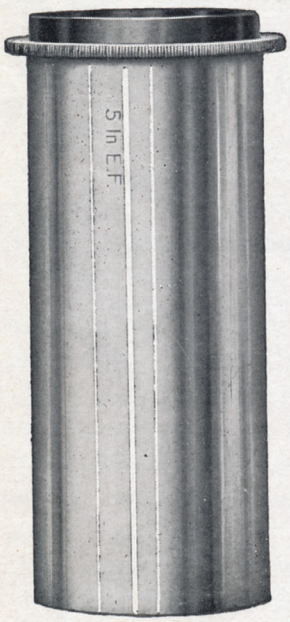


Fig. 35

The accompanying tables will guide you in making your selection. If you are to use lantern or stereopticon slides as well as moving picture films, the size of picture projected by the stereopticon lens should match the height of the moving picture. The height of the moving picture is always approximately three-quarters of the width. These proportions are determined by the opening in the aperture plate and not by the lens.

Always select your lenses before painting or fixing the border around your screen. Don't arbitrarily fix the border and then expect us to furnish lenses which will exactly fill it. The following tables cover both films and slides:

Table for Film Projection

Equiv. FOCUS IN INCHES	Distance from Film to Screen											
	15 ft.	20 ft.	25 ft.	30 ft.	35 ft.	40 ft.	45 ft.	50 ft.	60 ft.	70 ft.	80 ft.	90 ft.	100 ft.
2	5.1	6.8	8.5	10.3	12.0	13.7	15.4	17.1	2.06	24.0	27.5	30.8	34.3
	7.0	9.3	11.6	14.0	16.4	18.7	21.1	23.4	29.4	32.7	37.4	42.1	46.8
2⅛	4.8	6.4	8.0	9.6	11.3	12.9	14.5	16.1	19.4	22.6	25.8	28.9	32.3
	6.5	8.7	11.0	13.2	15 4	17.6	19.8	22.0	26.4	30.8	35.2	39.3	44.0
2¼	4.5	6.1	7.6	9.1	10.6	12.2	13.7	15.2	18.3	21.3	24.4	27.2	30.5
	6.2	8.3	10.3	12.4	14.5	16.6	18.7	20.8	24.9	29.1	33.2	37.2	41.6
2½	4.1	5.4	6.8	8.2	9.6	10.9	12.3	13.7	16.4	19.2	22.0	24.5	27.4
	5.6	7.4	9.3	11.2	13.1	14.9	16.8	18.7	22.4	26.2	29.9	33.4	37.4
2¾	3.7	4 9	6.2	7.4	8 7	9.9	11 2	12.5	15.0	17.4	20.0	22.3	24.9
	5.0	6.7	8.4	10.2	11.9	13.6	15.3	17.0	20.4	23.8	27.2	30.4	34.0
3	3.4	4.5	5.7	6.8	8.0	9.1	10 3	11.4	13.7	16.0	18.3	20.4	22.9
	4.6	6.2	7.7	9.3	10.9	12.4	14.0	15.6	18.7	21.8	24.9	27.8	31.2
3¼	3.1	4.2	5.2	6.3	7.3	8.4	9.5	10.5	12.6	14.8	16.9	18.9	21.1
	4.3	5.7	7.1	8.6	10 0	11.5	12.9	14.4	17.2	20.1	23.0	25.7	28.8
3½	2.9	3.9	4.9	5.8	6.8	7.8	8.8	9.8	11.7	13.7	15.7	17.6	19.6
	4.1	5.3	6.6	8.0	9.3	10.6	12.0	13.3	16.0	18.7	21.4	24.0	26.7
3¾	2.7	3.6	4.5	5.4	6.4	7.3	8.2	9.1	11.0	12.8	14.6	16.4	18.3
	4.0	4.9	6.2	7.4	8 7	9.9	11.2	12.4	14.9	17.4	19.9	22.4	24.9
4	2.6	3.4	4.2	5 1	6.0	6.8	7.7	8.5	10.3	12.0	13.7	15.4	17.1
	3.8	4.6	5.8	7.0	8.1	9.3	10.5	11 6	14.0	16.3	18.7	21.0	23.4
4¼	2.4	3.2	4.0	4 8	5.6	6.4	7.2	8.0	9 6	11.3	12.9	14.5	16.1
	3.6	4.3	5.4	6 5	7.6	8.7	9.8	11.2	13.2	15.4	17.6	19.8	22.0
4½	2.2	3.0	3 8	4.5	5.3	6.2	6.8	7.7	9	10.6	12.2	13.7	15.4
	3.4	4.1	5.1	6.2	7.2	8.4	9.3	10.5	12.4	14.5	16.6	18.7	21.0
4¾	2.0	2.8	3.6	4.3	5.0	5.7	6.5	7.2	8.6	10.1	11.5	13.0	14 4
	3.2	3.9	4.9	5.8	6 8	7.8	9.2	9.8	11.8	13.7	15.7	17.7	19.7
5	1.9	2.6	3.4	4.1	4.8	5.4	6.1	6.8	8.2	9.6	10.9	12.3	13.7
	3.1	3.7	4.6	5.5	6.5	7.4	8.4	9.3	11.2	13.0	14.9	16.8	18.7
5¼	1.8	2.5	3.2	3.9	4.5	5.2	5.8	6.5	7.8	9.1	10.4	11.7	13.0
	2.9	3.5	4.4	5.3	6.2	6.9	8.0	8.8	10.6	12.4	14.2	16.0	17.8
5½	1.7	2.4	3.1	3.7	4.3	4.9	5.6	6.2	7.4	8.7	9.9	11.2	12.4
	2.8	3.3	4.2	5.0	5.9	6.7	7.6	8.4	10.2	11.9	13.6	15.3	17.0
5¾	1.6	2.3	2 9	3.5	4.1	4.7	5.3	5.9	7 1	8.3	9.5	10.7	11.9
	2.7	3.2	4.0	4.8	5.6	6.4	7.3	8 1	9.7	11.3	13.0	14.6	16.2
6	1.5	2.2	2.8	3.4	4.0	4 5	5.1	5.7	6.8	8.0	9.1	10.3	11.4
	2.6	3.1	3.8	4.6	5.4	6.2	7.0	7.7	9 3	10.9	12.4	14.0	15.6
6½							4.7	5.2	6.3	7.3	8.4	9.6	10.6
							6.4	7.1	8.6	10.0	11.4	13.0	14.5
7							4.4	4.9	5.8	6.8	7.8	8,8	9.8
							6.0	6.6	8.0	9.3	10.6	12.0	13.3
7½								4.5	5.4	6.4	7.3	8.2	9.1
								6.2	7.4	8.7	10.0	11.2	12.3
8									5.1	6.0	6.8	7.7	8.5
									7.0	8.1	9.3	10.5	11.6

Table for Stereoptican Projection
2 3-4 x 3-in. Mat Opening

Equiv. FOCUS IN INCHES	Distance from Slide to Screen											
	15 ft.	20 ft.	25 ft.	30 ft.	35 ft.	40 ft.	45 ft	50 ft.	60 ft.	70 ft.	80 ft.	90 ft.	100 ft.
8		6.6	8.4	10.1	11.8	13.5	15.2	17.0	20.4				
		7.3	9.1	11.0	12.9	14.8	16.6	18.5	22.3				
8½		6.2	7.9	9.5	11.1	12.7	14.3	16.0	19.2				
		6 8	8.6	10.3	12.1	13.9	15.6	17.4	20.9				
9		5.9	7.4	8.9	10.5	12.0	13.5	15.1	18.1	21.1			
		6.4	8.1	9.8	11.4	13.1	14.8	16.4	19.8	23.1			
9½		5.6	7.0	8.5	9.9	11.4	12 8	14.2	17 1	20.0			
		6.1	7.6	9.2	10.8	12.4	14.0	15.5	18.7	21.9			
10		5.3	6.6	8.0	9.4	10.8	12.2	13.5	16.3	19.0	21.8		
		5.8	7.3	8.8	10.3	11.8	13.3	14.8	17.8	20.8	23.8		
12			5.5	6.6	7.8	8.9	10.1	11.2	13.5	15.8	18.1	20.4	
			6.0	7.3	8.5	9.8	11.0	12.3	14.8	17.3	19.8	22.3	
14				5.6	6.6	7.6	8.6	9.6	11.6	13.5	15.5	17.5	19.4
				6.2	7.3	8.3	9.4	10.5	12.6	14.8	16.9	19.0	21.2
15					6.2	7.1	8.0	8.9	10.8	12.6	14.4	16.3	18.1
					6.7	7.7	8.7	9.7	11.7	13.7	15.7	17.7	19.7
16					5.8	6.6	7.5	8.4	10.1	11.8	13.5	15.2	17.0
					6.3	7.3	8 2	9.1	11.0	12.9	14.8	16.6	18.5
17					5.4	6.2	7 0	7.8	9.5	11.1	12.7	14.3	15.9
					5.9	6.8	7.7	8.6	10.3	12.1	13.9	15.7	17.5
18					5.1	5.9	6.6	7.4	8.9	10.5	12.0	13.5	15.1
					5.6	6.4	7.3	8.1	9.8	11.4	13.1	14.8	16.4
20						5.3	6.0	6.6	8.0	9.4	10.8	12.2	13.5
						5.8	6.5	7.3	8.8	10.3	11.8	13.3	14.8
22							5.4	6.0	7.3	8.5	9.8	11.0	12.3
							5.9	6.6	7.9	9.3	10.7	12.0	13.4
24								5.5	6.6	7.8	8.9	10.1	11.2
								6.0	7.3	8.5	9.8	11.0	12.3
26								5.0	6.1	7.2	8.2	9.3	10.4
								5.5	6.7	7.9	9.0	10.1	11.2
28								5.0	5.7	6.3	7.0	7.6	8.2
								5.5	6.2	6.9	7.7	8.4	9.1

Iris Dissolver

The dissolving stereopticon effect is best obtained by mounting one lantern above another, both to cover the same area on the screen, and equipping the lenses with a patented iris dissolver. This device consists of two iris diaphragms, one attached to each of the two lenses and operated by a connecting rod supplied with a convenient handle. As the light from one lens is shut off evenly and gradually, it comes on through the other at exactly the same ratio. It adds greatly to the effectiveness of the stereopticon pictures. Power's Dissolving Attachment is fully described on page 48.

Iris Dissolver for half size lenses (sold in pairs only) $30.00

Segments for Iris Dissolver 25

Dissolving View Attachment

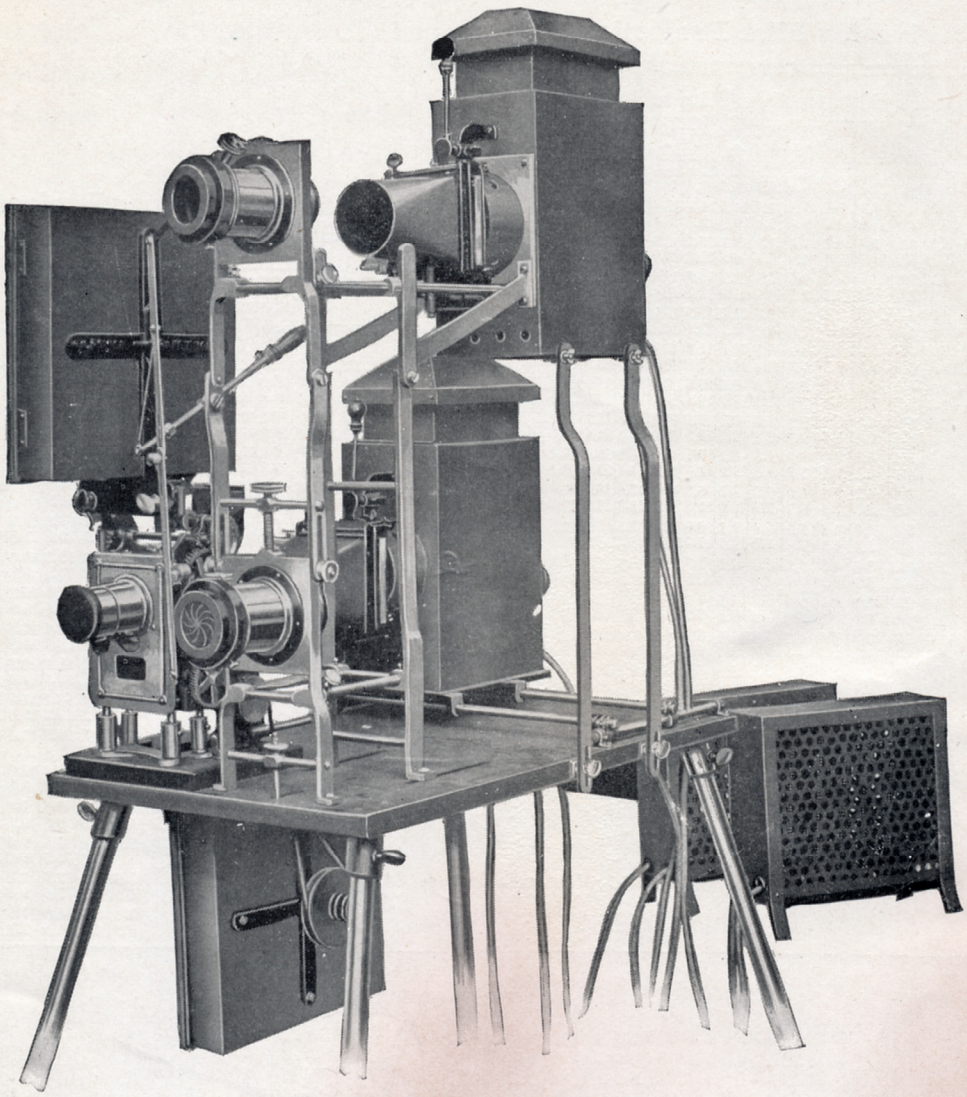


Fig. 36

Power's Cameragraphs can be supplied with a Dissolving View Attachment which adds wonderfully to the effectiveness of stereopticon views. Figure 36 shows Power's No. 5 with the Dissolving Attachment. The arrangement is quite similar for the No. 6 Cameragraph. It consists of an extra lamp house, elevated on a substantial frame, so that the lower lamp house can be quickly moved into position on its sliding ways for either moving picture or stereopticon projection. The frame supports not only the upper lamp house, but also a pair of matched half size stereopticon lenses and a pair of iris diaphragm shutters mounted on the stereopticon lenses. A handle is provided to operate the two diaphragms so that one opens in the same ratio as the other closes, thus dissolving one picture into the other. When ordering, always state which model of Power's Cameragraph you are using, the exact distance from machine to screen, width of picture desired and size of screen.

Price, complete, including 110 volt adjustable rheostat, ready for attachment to No. 5 or No. 6 Cameragraph..... $150.00

Power's "Improved" Film Rewinder

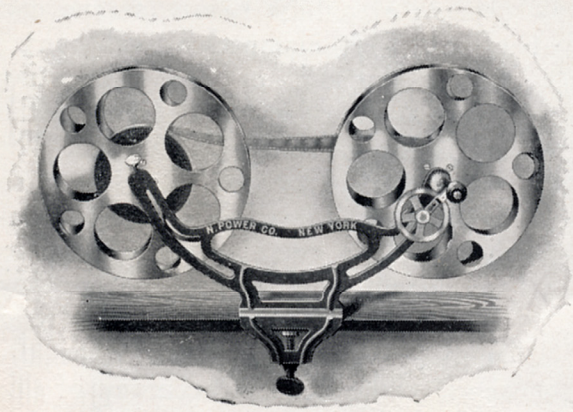


Fig. 37

This rewinder, Fig. 37, consists of a malleable iron casting so constructed as to hold the two reels. It can be readily attached to a table or shelf by means of the clamp and thumbscrew. There is a space of 14 inches between the reel centers.

Price Power's "Improved" Film Rewinder $3.50

Power's Perfect Rewinder

This rewinder, Fig. 38, consists of two very substantial castings which can be clamped or screwed to a table or shelf. Its advantage consists not only in its more substantial construction, but also in the fact that the two elements can be placed any desired distance apart, thus permitting ample room for the inspection and splicing of the film, as it is being rewound. The internal gear removes all danger of crushing the fingers or catching and tearing the film in case it slips off the reel This rewinder is regularly furnished with Power's No. 6 and No. 6A Cameragraph. It is a great favorite with the operators, and it is also used extensively by the film exchanges in their Inspection Departments.

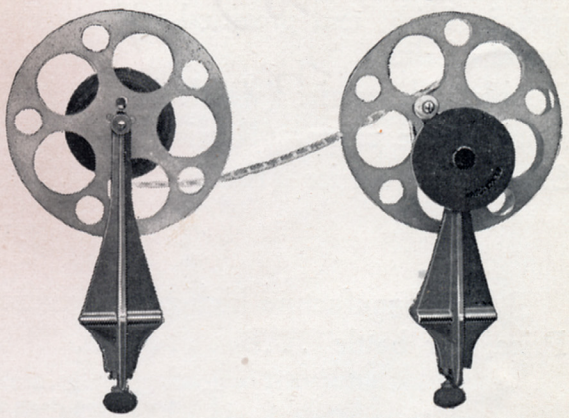


Fig. 38

Price of Power's "Perfect" Rewinder, complete $5.00
Price of element with rewinding gears and handle..... 3.50
Price of dummy with spindle 1.50

Power's Film Measuring Machine

Our film measuring machine, Fig. 39, is the most accurate on the market. It is used by the Customs Department of the United States Government and a great many of the photoplay manfacturers and film exchanges. It consists of a base board, at one end of which is clamped a reel hanger with a dummy, or reel supporting frame at the other end. Between the two is the measuring mechanism. The dial reads up to 100 feet. It is so constructed as to be absolutely accurate, and by counting the revolutions any length of film can be quickly measured. The dial is made to read in meters instead of feet, when desired. The extreme accuracy of this device will oftentimes save its first cost many times over.

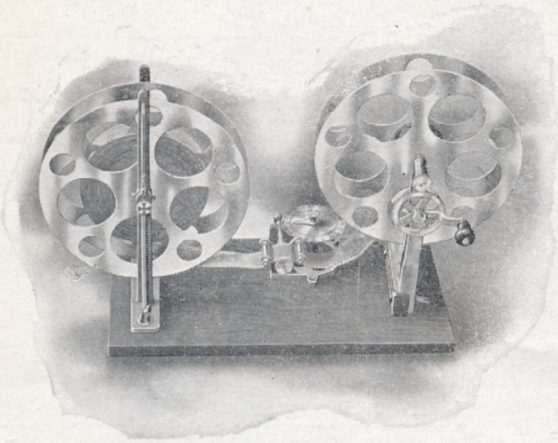


Fig. 39

Price Power's Film Measuring Machine, complete $40.00
Price Mechanism only 35.00

Slide Carriers

Slide carriers are made for Power's Cameragraphs in two styles, namely, double and single. The double slide carrier is intended for machines having but the one stereopticon lens. The single slide carrier is designed for use with Dissolving View Stereopticon Attachment. Both kinds are substantially made, neat in finish, and provided with an automatic slide lifter to facilitate the removal of slides.

Double slide carrier (wooden) ..... $ .50
Double slide carrier (Russia iron) 1.50
Single slide carrier (Russia iron) 1.50

Film Cement

We manufacture high-grade cement for joining celluloid inflammable films.

Price, per bottle ..... $ .25

Lubricating Oil

Too much attention cannot be paid to the proper lubrication of the moving picture machine head, or mechanism. Thin oils, such as are too commonly used are not suitable for Power's No. 6 mechanism. Its heavier construction requires a high-grade oil having some body. For the convenience of the thousands of users of Power's Cameragraphs, we have put up in four-ounce bottles an oil which we have carefully selected and recommend.

Price, per bottle ..... $ .30

Graphite

For the lubrication of the gears of moving picture mechanisms, particularly Power's No. 6, we recommend powdered graphite thinly mixed with the oil before mentioned. Only a little graphite is necessary, and it should be cleaned off once a week if the machine is used every day. This is to remove dust and dirt which forms a grit which will gradually cut the gears. Kerosene or gasoline can be used for cleaning purposes, and after allowing the mechanism to drip off, it should again be carefully lubricated. We also strongly recommend that all screws and movable parts of the lamp be kept lubricated by dipping same in powdered graphite. The graphite may also be dusted on dry.

Price, half-pound cans ..... $ .25

Carbons

For the convenience of our customers we carry in stock high-grade carbons in the sizes as listed below. The sizes generally used are as follows:

For alternating current, 5/8 inch cored, top and bottom.

For direct current, 5/8 inch cored, upper (positive) and 1/2 inch solid lower (negative).

5/8 inch by 6 inch, cored, per hundred	$2.75
5/8 inch by 12 inch, cored, per hundred	5.00
5/8 inch by 12 inch, solid, per hundred	4.00

Other sizes furnished on special order. Special price made when furnished in lots of one thousand.

Screens

Our screens, listed below, are specially adapted for traveling shows. They are made of the best quality material, with loops around the four sides of the screen. They are furnished in the following sizes:

24 feet square	$18.00
18 feet square	12.00
15 feet square	10.00
12 feet square	7.00
9 feet square	4.00

Trunks and Mechanism Carrying Cases

These trunks are specially designed for our Cameragraphs and have separate compartments for the different parts of the machine, as well as providing ample room for carrying films, stage cable, screens and accessories. They are of very substantial construction and many of our customers have traveled thousands of miles without injury to either trunk or contents.

Price of trunk for No. 5 Cameragraph $35.00
Price of trunk for No. 6 Cameragraph 42.00

A great many traveling exhibitors object to shipping the mechanism of the Cameragraph in the trunk with the rest of the equipment. We have therefore made up a very convenient carrying case for either the No. 5 or No. 6 mechanism. It is made of the best indurated fibre, has a strap handle, and is light and substantial.

Price of carrying case $3.50

Motor Attachments

Motor drive is now commonly used and certain machines, including Power's Cameragraph No. 6A, have been approved for use with motor drive by the National Board of Fire Underwriters and the Municipal Inspection Department of various large cities. We have designed a motor attachment for our mechanisms, to which the motors are belted, thus permitting this style of drive without causing undue wear or friction. In no case should a motor be belted to the fly wheel of a Power's Cameragraph. The attachment for our No. 6 mechanism, Fig 40, and a similar attachment for our No. 5 mechanism is so designed that it can be readily fastened to the base of the mechanism, on the side opposite the crank, and meshes into the large idler gear on that side.

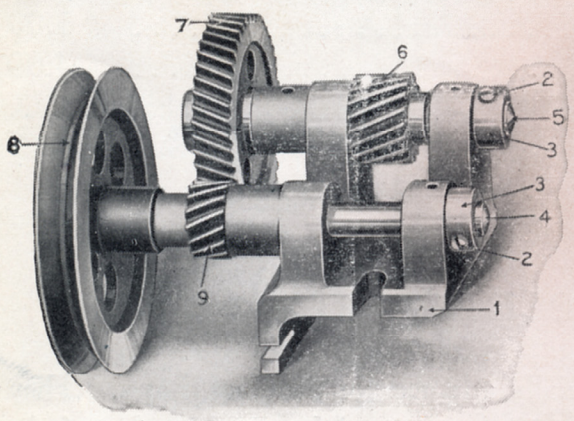


Fig. 40

No. 5 Motor Attachment $5.00
No. 6 Motor Attachment 7.50

Motors

Having in mind the long hours of service in most theatres, and the variable speed nature of the work required, we have selected motors for both alternating and direct current which are specially suited to meet these requirements. These motors have been approved by the National Board of Fire Underwriters, and the various municipal inspection departments where motor driven machines are permitted. The normal speed of Power's Cameragraph mechanism is 60 turns of the crank per minute. The motors are designed for speeds which will attain a maximum of 75 revolutions and a minimum of 50 revolutions of the crank shaft. A higher speed is very injurious to the mechanism and the maximum obtainable with the motor should, and need never very seldom be used.

Direct current, 110 volt motor, with speed regulator $30.00
Direct current, 220 volt motor, with speed regulator 35.00
Alternating current, 110 volt, 60 cycle motor, with speed regulator... 30.00
Alternating current, 220 volt, 60 cycle motor, with speed regulator .. 35.00

Other voltages quoted on application.

Alternating current motors for other frequencies can be furnished.

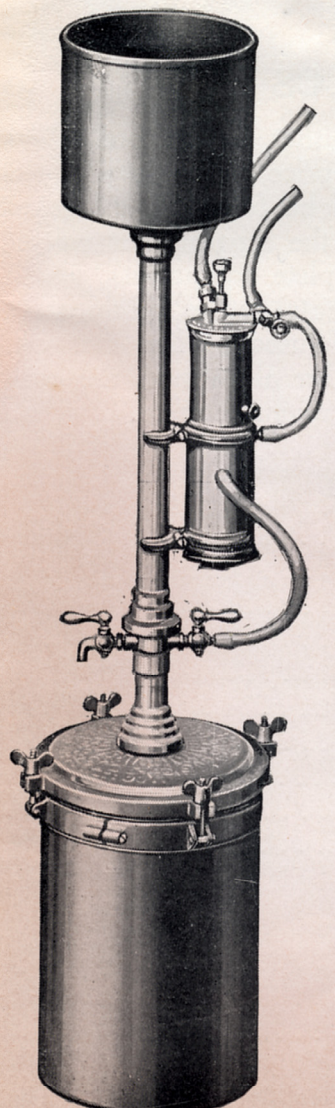


Fig. 41

Model B. Portable Gas-Making Outfit

Where electricity is not available calcium light can be used with excellent results. The compressed gases in steel cylinders, furnished by the calcium light companies, should be used when it is possible to do so, as a more brilliant light will thereby be obtained. Where the compressed gases are not available the Portable Gas-Making Outfit may be used. The outfit consists of two parts:

1. THE OXYGEN GENERATING APPARATUS.
2. THE SATURATOR, or APPARATUS used to replace the hydrogen tank.

The dimensions of the outfit are: Height, 44 in.; of oxygen compartment, 15 in.; diameter oxygen compartment, 9 inches.

The weight packed in portable case is 35 pounds. There is required for one and a half to two hours, 24 cakes of oxone, one lime and one-half pound ether.

Model B outfit, complete (without chemical or calcium burner) $35.00
With standard calcium burner (Fig. 42) and connecting rubber tuming 40.00
Oxone oxygen compound (24 cakes in sealed can), per can 1.35
Limes, 7/8 inch diameter, per dozen 1.00
Ether, per pound 1.00

Standard Calcium Burner

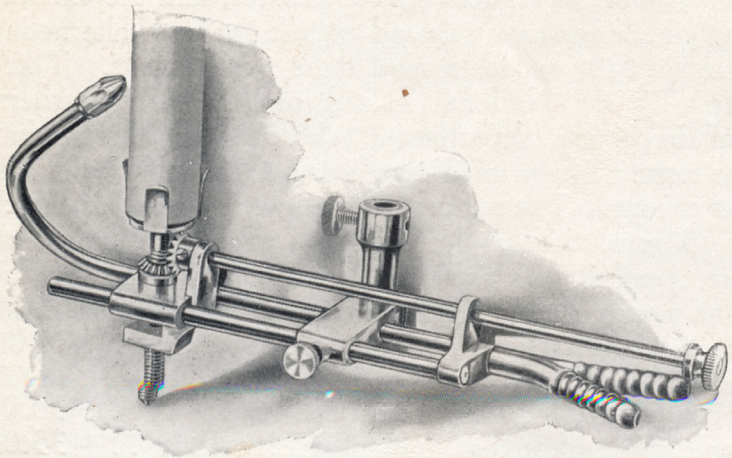


Fig. 42

Our "Standard" calcium burner, Fig. 42, is thoroughly serviceable and has been in general use for many years. It is substantially constructed throughout, of brass and heavily nickel plated. The lime support is carried on a threaded standard turning in extra long bearings, thus assuring perfect steadiness of the lime.

Price, with six feet of rubber tubing for connections..... $5.00

Table of Allowances

Surprise, and sometimes indignation, is expressed that we do not allow for parts omitted from a complete machine the same price which is charged when these parts are sold separately. The reason will be found if one takes the time to figure the price of a complete machine at the separate list prices. As an inducement to the exhibitor to buy from us complete equipments, which have been carefully assembled and are guaranteed accurate and as represented, the various items included in such an equipment are figured at less than we can afford to handle them for when sold separately. Our allowances are consistent with fairness and the practice of other reputable manufacturers.

No. 6A Cameragraph

Rheostat	$ 6.00
Stereopticon attachment	.85
Switch and cover	2.25
Asbestos covered wire and lugs	1.25
Arc lamp	12.50
Condensers, each	.50
Reels, each	.50
Slide carrier	.75
Upper magazine	10.00
Legs and floor sockets	2.50

No. 6 Cameragraph

Rheostat	$ 6.00
Stereopticon attachment	.85
Switch and cover	1.12

Asbestos covered wire, with lugs	$ 1.25
Arc lamp	7.50
Condensers, each	.50
Reels, each	.50
Slide carrier	.75
Upper magazine	10.00
Lower magazine, with take-up	17.50
Table board	1.00
Leg flanges	1.00
Legs	4.25
Floor sockets	1.00

No. 5 "New York Approved" Cameragraph

Rheostat	$ 6.00
Stereopticon attachment	.75
Switch and cover	1.12
Asbestos covered wire, with lugs	1.25
Arc lamp	4.00
Condensers, each	.50
Reels, each	.50
Slide carrier	.75
Upper magazine	10.00
Lower magazine, with take-up	17.50
Table board	1.00
Leg flanges	1.00
Legs	3.25

No. 5 "Standard Underwriters'" Cameragraph

Rheostat	$ 6.00
Stereopticon attachment	.75
Switch	.38
Asbestos covered wire, with lugs	1.25
Arc lamp	4.00
Condensers., each	.50
Reels, each	.50
Slide carrier	.25
Upper magazine	10.00
Lower magazine, with take-up	17.50
Table Board	1.00
Leg flanges	1.00
Legs	3.25

No. 5 "Regular" Cameragraph

Rheostat	$ 5.00
Stereopticon attachment	.75
Switch	.38
Asbestos covered wire, with lugs	1.25
Arc lamp	4.00

Condensers, each	.50
Reels, each	.50
Slide carrier	.25
Upper magazine	10.00
Lower magazine, with take-up	17.50
Table Board	1.00
Leg flanges	1.00
Legs	3.25

Price List of Parts of Cameragraph

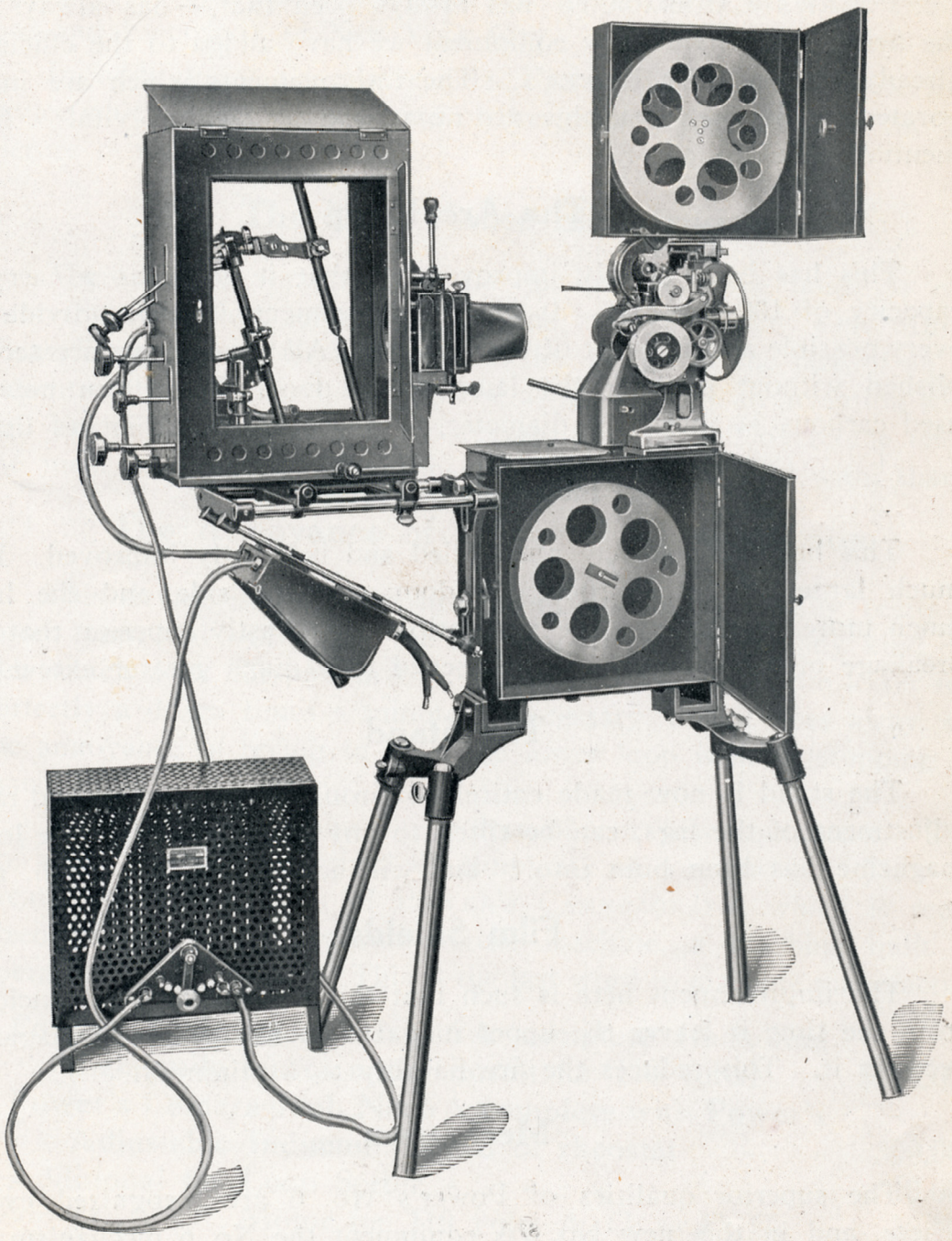
THIS LIST DOES NOT INCLUDE REPAIR PARTS.

No. 6 Cameragraph mechanism, or head, without lenses, but with take-up feed and Style B automatic fire shutter, without which it is never sold	$132.50
No. 5 Cameragraph mechanism, without lenses, but with take-up feed and Style B automatic fire shutter	102.50
No. 5 Cameragraph mechanism, without lenses, but with take-up feed and Style A automatic fire shutter	98.50
Automatic Fire Shutter, Style A, for No. 5 mechanism	8.00
Automatic Fire Shutter, Style B, for No. 5 or No. 6 mechanism	12.00
Automatic Fire Shutter, Style B, for No. 6A machine	13.25
Lamp House for No. 6A Cameragraph, complete, with sliding ways, slide carrier, condenser holders and condensers	30.00
Lamp House for No. 6 Cameragraph, complete, with sliding ways, sliding carrier, condenser holders and condensers	26.00
Lamp House, New York Approved, for No. 5 Cameragraph, complete with sliding ways, slide carrier, condenser mount and condensers	26.00
Lamp House "Regular" for No. 5 Cameragraph, complete, with sliding ways, slide carrier, condenser mount and condensers	20.00
No. 6A Arc Lamp	25.00
"Perfect" Arc Lamp, for No. 6 Cameragraph	15.00
"Perfect" Arc Lamp, for No. 5 Cameragraph	15.00
"Regular" Arc Lamp, for No. 5 Cameragraph	8.00
No. 6A Stand, with legs and leg sockets	20.00
No. 6 table, complete, with legs, flanges and floor sockets	14.50
No. 5 table, complete, with legs and flanges	10.50
No. 6A Legs, per set	5.00
No. 6 Legs, per set	8.50
No. 5 Legs, per set	6.50
Leg flanges for No. 5 and No. 6 Cameragraphs, per set	2.00
Floor sockets, per set	2.00
No. 6 Table Board	2.00
No. 5 Table Board	2.00
Film take-up, separate from magazines	7.50
Film take-up feed for attachment to No. 6 Cameragraph mechanism	7.50
Film take-up feed for attachment to No. 5 Cameragraph mechanism	7.50

The following four page leaf
was inserted into the catalog perhaps
to substitute the missing pages 27, 28,
29, and 30 or was a catalog addendum.

Third Edition

Power's Cameragraph No. 6 A



MANUFACTURED BY

NICHOLAS POWER COMPANY

90 Gold Street, New York

EXTREME Pressure of business has held up our catalogue. We expect to have it in the printer's hands within a few days. In the meantime we offer this brief explanation of the principal features of our new machine.

No. 6 A Ahead of the Times

POWER'S CAMERAGRAPH has always been that,—has always led the field; and in this new equipment we have added to the efficiency already possessed by POWER'S. The improvements which are incorporated in our new machine are numerous, as well as vital. Brief mention is as follows:

The Arc Lamp

This has been greatly improved, so that it now has a carrying capacity of 100 amperes. It has 14 adjustments, which provide for every possible arrangement of the carbons. All adjustments are accomplished without opening the lamp house door. There can now be used carbons ¾ inches in diameter, 6 inches lower, 12 inches upper.

The Lamp House

This has been entirely remodelled and is greatly improved. It is much larger, far more roomy, a door on each side, and the lamp much more accessible. The ventilation is so vastly superior that the breakage of condensers will be lessened to a much greater extent.

The Stand

The stand is now made entirely of iron, which, by easy and rapid adjustment of the legs, can be tilted to any angle desired. The lower magazine has been built into it and will accommodate a 14 in. reel.

Film Shields

The improvement here is such that the film is practically enclosed from the time it leaves the upper magazine until the lower magazine receives it. This reduces the fire liability to a minimum.

Mechanism

The superior qualities of Power's No. 6 are recognized everywhere, and in this new No. 6 A equipment the No. 6 mechanism has been retained. This mechanism has proved its worth by perfect projection and substantial wearing qualities in over 6,000 installations all over the world, in all climates from Alaska to the equator, and in the hands of operators of all nationalities.

Each new equipment possesses the following improvements:

Longer Hours of Work without Retrimming.
Increased Carrying Capacity — Saving in Operating Expense.
Absolute Rigidity thereby Improving Projection.

The 6A equipment is approved with motor drive by the National Board of Fire Underwriters and the Department of Water Supply, Gas and Electricity of New York City.

In addition to the above, Mr. Nicholas Power has perfected a device which will overcome one of the greatest drawbacks in moving-picture projection. It means

The Dark House Elimination

There comes a moment in the picture when the house is most interested, and then something happens and you flash "One Minute, Please" on the screen and start to fix things in the face of an impatient audience. This is now done away with by an invention which will be hailed with delight by operators, as it will overcome one of the most aggravating conditions they have to contend with, that is,

The Annoyance of Losing the Lower Loop

This device is a simple attachment and automatically resets the lower loop, and will enable the operator to run almost any kind of a film which does not pull in too entirely. It will reset the lower loop perfectly a dozen times a minute if necessary, and it does away with the annoyance of trying to reset the lower loop without stopping the machine.

This in brief explains the points of our new equipment. They are all of them characterized by simplicity of construction. They add greatly to the efficiency of POWER'S CAMERAGRAPH, which is recognized as the modern motion-picture machine, a machine built for operators by an operator. This is the last word in machine manufacture.

Power's Cameragraph No. 6A complete (including high-grade lenses and rheostat for 110 volts) -	**$250.00**
Power's Cameragraph No. 6A complete with Power's Adjustable Inductor instead of rheostat - -	**300.00**
Additional for Loop Setter - - - - - -	**10.00**
" " Motor for 110 volts A. C. or D. C. - (Variable Speed)	**30.00**
" " Motor Attachment for No. 6 Mechanism	**7.50**

NOTE.—Power's No. 6A will always be furnished with the loop setter unless it is distinctly mentioned to omit it.

Power's Cameragraph No. 6 A with Motor Drive